

# TEN YEARS OF MULTIDISCIPLINARY TEAMS MEETINGS IN ONCOLOGY: CURRENT SITUATION AND PERSPECTIVES





# TEN YEARS OF MULTIDISCIPLINARY TEAMS MEETINGS IN ONCOLOGY: CURRENT SITUATION AND PERSPECTIVES

FRANCE VRIJENS, LAURENCE KOHN, CÉCILE DUBOIS, ROOS LEROY, IMGARD VINCK, SABINE STORDEUR



## COLOPHON

Title:	Ten years of multidisciplinary teams meetings in oncology: current situation and perspectives
Authors:	France Vrijens (KCE), Laurence Kohn (KCE), Cécile Dubois (KCE), Roos Leroy (KCE), Imgard Vinck (KCE), Sabine Stordeur (KCE)
Other authors who collaborated to a specific chapter of this report	Chapter 3: Harlinde De Schutter (Stichting Kankerregister – Fondation Registre du Cancer), Viki Schillemans (Stichting Kankerregister – Fondation Registre du Cancer) Chapter 4: Marc Bossens (RIZIV – INAMI), Lieve Vanwaeyenbergh (RIZIV – INAMI) Chapter 6: Peter Pype (Universiteit Gent), Fien Mertens (Universiteit Gent), JeanLuc Belche (Université de Liège), Christiane Duchesnes (Université de Liège), Piet Vanden Bussche (Universiteit Gent), Myriam Deveugele (Universiteit Gent), Frédéric Ketterer (Université de Liège), Marc Vanmeerbeek (Université de Liège)
Project coordinator and Senior supervisor:	Sabine Stordeur (KCE)
Reviewers:	Nadia Benahmed (KCE), Maria Isabel Farfan-Portet (KCE), Raf Mertens (KCE)
External experts and stakeholders:	Marc Bossens (RIZIV – INAMI), Michaël Callens (Christelijke Mutualiteit), Sophie Cvilic (Clinique Saint-Jean), Elke Delaey (UZ Gent; WeDO), Jan De Lepeleire (KU Leuven), Brigitte Delvaux (Clinique Saint-Jean), Hilde Engels (RIZIV – INAMI), Sylvie Lambin (Cliniques universitaires Saint-Luc), Frédéric Maddalena (Cliniques universitaires Saint-Luc), Benoît Mores (WIV – ISP), Marianne Paesmans (Institut Jules Bordet), Johan Pauwels (Zorgnet Vlaanderen), Marc Peeters (UZA; College voor Oncologie), Freddy Penninckx (PROCARE), Simon Van Belle (UZ Gent), Saskia Van den Bogaert (FOD Volksgezondheid – SPF Santé Publique), Liesbet Van Eycken (Stichting Kankerregister – Fondation Registre du Cancer), Ingrid Waeytens (UZ Gent; WeDO), Patrick Waterbley (FOD Volksgezondheid – SPF Santé Publique)
Discussion group web survey results (French):	Hélène Antoine-Poirel (Cliniques universitaires Saint-Luc), Reza Chamlou (Clinique Saint-Jean), Gilbert Chantrain (CHU Saint-Pierre), Jean-Charles Coche (Clinique Saint-Pierre Ottignies), Nathalie Coeurnelle (CHR de la Citadelle), Lionel Duck (Clinique Saint-Pierre Ottignies), Rose Ghanooni (Hôpital Erasme ULB), Joseph Gitani (Centre Hospitalier Interrégional Edith Cavell (CHIREC)), Joëlle Larzille (Hôpital Erasme), Baudouin Mansvelt (Hôpital de Jolimont), Céline Maurois (CHU Liège), Michel Naudin (CHU Ambroise Paré), Vincent Remouchamps (Clinique Sainte Elisabeth Namur), Nathalie Renard (Centre Hospitalier de Wallonie Picarde (CHWAPI)), Pierre Scalliet (Cliniques universitaires Saint-Luc)
Discussion group web survey results (Dutch):	Johan Abeloos (AZ Sint Jan Brugge), Gwenny De Metter (OLV Ziekenhuis Aalst), Marijke Decat (CHIREC), Mieke Decavele (AZ Groeninge Kortrijk), Sofie Derijcke (AZ Groeninge Kortrijk), Katrien Devalez (UZ Gent), Karin



	<p>Haustermans (UZ Leuven), Anne Hoorens (UZ Brussel), Sabine Maene (AZ Sint Jan Brugge), Geert Roeyen (UZA), Gwenny Sys (UZ Gent), Filip Van Aelst (AZ Delta Roeselare), Marian Vanhoeij (UZ Brussel)</p>
External validators:	<p>Josep Maria Borrás (Universitat de Barcelona, Spain), Jeanne-Marie Bréchet (Institut National du Cancer, France), Olivier Schmitz (Institut de Recherche Santé et Société, Faculté de Santé publique, Université Catholique de Louvain)</p>
Acknowledgements:	<p>Carl Devos (KCE), Mia Slabbaert (Stichting Kankerregister – Fondation Registre du Cancer), Nancy Van Damme (Stichting Kankerregister – Fondation Registre du Cancer)</p>
Reported interests:	<p>Membership of a stakeholder group on which the results of this report could have an impact: Peter Pype (Domus Medica), Fien Mertens (Domus Medica), Mieke Decavele (WeDO), Gwenny De Metter (WeDO), Sabine Maene (committee member <i>Beroepsvereniging Sociaal Werkers in Ziekenhuizen</i>)</p> <p>Owner of subscribed capital, options, shares or other financial instruments: Pierre Scalliet (IBA-SA)</p> <p>Fees or other compensation for writing a publication or participating in its development: Anne Hoorens (guidelines GIST Novartis)</p> <p>Participation in scientific or experimental research as an initiator, principal investigator or researcher: Geert Roeyen (clinical studies), Gwen Sys (PhD about sarcomas behaviour), Anne Hoorens (scientific research as a staff member of a university hospital)</p> <p>Grants, fees or funds for a member of staff or another form of compensation for the execution of research: Geert Roeyen (grants for lecture), Vincent Remouchamps (one student with a grant at the Plan Cancer)</p> <p>Consultancy or employment for a company, an association or an organisation that may gain or lose financially due to the results of this report: Vincent Remouchamps (participation in several study projects without conflict of interests or benefits),</p> <p>Payments to speak, training remuneration, subsidised travel or payment for participation at a conference: Vincent Remouchamps (oncological congress), Geert Roeyen (master's degree; symposia), Gwen Sys (lectures about sarcomas)</p> <p>Presidency or accountable function within an institution, association, department or other entity on which the results of this report could have an impact: Baudouin Mansvelt (president of the <i>Union Professionnelle des chirurgiens belges</i>), Geert Roeyen (member of the <i>Belgische Transplantatie Raad</i>; president local council for transplantations of the UZA; board member Hepatobiliary surgery of the Royal Belgian Society for Surgery), Johan Abeloos (president Vlaamse Werkgroep Hoofd- en Halstumoren), Sabine Maene (president study- and training group of the medical social work West Flanders)</p>
Layout:	<p>Ine Verhulst</p>



**Disclaimer:**

- **The external experts were consulted about a (preliminary) version of the scientific report. Their comments were discussed during meetings. They did not co-author the scientific report and did not necessarily agree with its content.**
- **Subsequently, a (final) version was submitted to the validators. The validation of the report results from a consensus or a voting process between the validators. The validators did not co-author the scientific report and did not necessarily all three agree with its content.**
- **Finally, this report has been approved by common assent by the Executive Board.**
- **Only the KCE is responsible for errors or omissions that could persist. The policy recommendations are also under the full responsibility of the KCE.**

Publication date: 17 February 2015 (2<sup>nd</sup> print; 1<sup>st</sup> print: 21 January 2015)  
Domain: Health Services Research (HSR)  
Keywords: Multidisciplinary meeting (MDM); Multidisciplinary team (MDT); Cancer management; Clinical decision-making; Patient outcomes; Tumour boards  
NLM Classification: QZ 200  
Language: English  
Format: Adobe® PDF™ (A4)  
Legal depot: D/2015/10.273/21  
Copyright: KCE reports are published under a “by/nc/nd” Creative Commons Licence  
<http://kce.fgov.be/content/about-copyrights-for-kce-reports>.



How to refer to this document?

Vrijens F, Kohn L, Dubois C, Leroy R, Vinck I, Stordeur S. Ten years of multidisciplinary teams meetings in oncology: current situation and perspectives. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2015. KCE Reports 239Cs. D/2015/10.273/21.

This document is available on the website of the Belgian Health Care Knowledge Centre.



## ■ TABLE OF CONTENTS

LIST OF FIGURES .....	5
LIST OF TABLES .....	7
LIST OF ABBREVIATIONS .....	9
■ SCIENTIFIC REPORT .....	10
1 INTRODUCTION, OBJECTIVE AND RESEARCH QUESTIONS .....	10
1.1 INTRODUCTION .....	10
1.2 OBJECTIVES AND RESEARCH QUESTIONS .....	11
1.3 STRUCTURE OF THIS REPORT .....	11
2 BACKGROUND INFORMATION .....	12
2.1 THE BELGIAN CONTEXT .....	12
2.1.1 Evolution of billing codes and accessory legislation .....	12
2.1.2 The Cancer Plan and the financing of extra manpower in oncological centres .....	16
2.1.3 Information flows between hospitals, the Belgian Cancer Registry and the sickness funds .....	17
2.1.4 Evolution in number of MDT meetings and costs .....	18
2.2 THE INTERNATIONAL CONTEXT – WHAT WE LEARN FROM THE LITERATURE .....	21
2.2.1 Variable MDT practice around the globe .....	21
2.2.2 Benefits of multidisciplinary meetings/settings .....	21
2.2.3 Barriers and obstacles for efficient multidisciplinary meetings/settings .....	23
2.2.4 Core pillars of an effective MDT meeting .....	23
2.3 KEY MESSAGES .....	24
3 ANALYSIS OF BELGIAN CANCER REGISTRY AND BILLING DATA FOR 7 CANCER TYPES .....	24
3.1 INTRODUCTION .....	24
3.2 METHODS .....	25
3.2.1 General methodology .....	25
3.2.2 Specific methodology for volume analyses .....	27
3.3 DATA LIMITATIONS .....	27



3.4	RESULTS .....	28
3.4.1	General results over all cancers .....	28
3.4.2	Percentage of MDT meetings performed per cancer.....	28
3.4.3	Missing cancer stage for patients discussed during a MDT meeting .....	30
3.4.4	Timing and number of MDT meetings.....	30
3.4.5	MDT meeting participants: Specialists.....	31
3.4.6	MDT meeting participants: General Practitioners .....	35
3.4.7	MDT meeting types .....	35
3.4.8	Variability per centre and volume of patients discussed at a MDT meeting .....	37
3.5	CONCLUSION – DISCUSSION .....	41
3.6	KEY MESSAGES .....	42
<b>4</b>	<b>WHAT DO BILLING DATA TELL US ABOUT MDT MEETINGS IN BELGIUM?.....</b>	<b>43</b>
4.1	INTRODUCTION .....	43
4.2	METHODS.....	43
4.2.1	Time taken to book the MDT meetings .....	43
4.2.2	Benchmarking of MDT meeting activities.....	43
4.2.3	Studying the qualification of MDT meeting medical specialists .....	44
4.3	RESULTS .....	44
4.3.1	Time taken to book the MDT meetings .....	44
4.3.2	Benchmarking of MDT meeting activities.....	45
4.3.3	Studying the qualification of MDT meeting medical specialists .....	46
4.4	CONCLUSION – DISCUSSION .....	54
4.4.1	Time taken to book the MDT meetings .....	54
4.4.2	Benchmarking of MDT meeting activities.....	54
4.4.3	Studying the qualification of MDT meeting medical specialists .....	55
4.5	KEY MESSAGES .....	56
<b>5</b>	<b>MDT MEETINGS IN BELGIUM - EXPERIENCES AND PERCEPTIONS OF ITS PARTICIPANTS ..</b>	<b>57</b>
5.1	INTRODUCTION AND OBJECTIVES.....	57
5.2	METHODOLOGY .....	57



- 5.2.1 Data collection.....57
- 5.2.2 Population, sampling and recruitment.....57
- 5.2.3 Questionnaire development process .....58
- 5.2.4 Anonymity .....58
- 5.2.5 Survey process and structure .....58
- 5.2.6 Data analysis.....59
- 5.2.7 Discussion of the results with respondents.....59
- 5.3 RESULTS .....59
  - 5.3.1 Response rate.....59
  - 5.3.2 Sample characteristics.....60
  - 5.3.3 Functioning of the last MDT meeting attended by the respondents .....64
  - 5.3.4 Perceptions on the MDT meetings' functioning .....75
  - 5.3.5 GP's implication in MDT meetings .....78
  - 5.3.6 Administrative aspects of the MDT meetings.....81
  - 5.3.7 General comments on the MDT meetings .....81
- 5.4 DISCUSSION .....83
  - 5.4.1 Context and limitations.....83
  - 5.4.2 Organizational aspects of the MDT meetings.....84
  - 5.4.3 The MDT meeting as a fruitful place for training .....85
  - 5.4.4 Billing problems.....85
  - 5.4.5 The function of data manager .....85
  - 5.4.6 GP at the MDT meetings.....85
  - 5.4.7 Privacy.....86
  - 5.4.8 Utility of the handbook.....86
  - 5.4.9 Videoconference .....86
- 6 **WHAT IS THE CURRENT PERCEIVED ROLE OF GPs AT THE MDT MEETINGS? WHAT ARE THE GPs' EXPECTATIONS AND BARRIERS FOR THEIR ATTENDANCE AT THE MDT MEETINGS?.....87**
- 6.1 INTRODUCTION .....87
- 6.2 METHODS.....87



	6.2.1	Sample .....	88
	6.2.2	Ethical approval.....	88
	6.2.3	Data collection tool.....	88
	6.2.4	Data collection process .....	89
	6.2.5	Analysis.....	89
6.3		FINDINGS .....	89
	6.3.1	Sample description.....	89
	6.3.2	Results .....	91
6.4		DISCUSSION .....	103
	6.4.1	Attendance to the MDT meeting is part of the GP's work.....	105
	6.4.2	The practical organisation of MDT meetings and GP's practice often act as barriers to attendance (Structural aspects on micro- and meso-level) .....	105
	6.4.3	The GP's perceived added value to the MDT meeting discussion is an important motivator to participate.....	106
	6.4.4	Some suggestions for improvement .....	106
6.5		STRENGTHS AND LIMITATIONS OF THE STUDY .....	108
	6.5.1	Strengths.....	108
	6.5.2	Limitations .....	108
6.6		KEY MESSAGES .....	108
7		<b>CONCLUSION, DISCUSSION AND POLICY RECOMMENDATIONS.....</b>	<b>109</b>
■		<b>REFERENCES.....</b>	<b>110</b>



# LIST OF FIGURES

Figure 1 – Data flows between hospitals, sickness funds and the Belgian Cancer Registry .....18

Figure 2 – Evolution of number of MDT meetings (2003-2013) .....19

Figure 3 – Percentage of patients diagnosed with an invasive cancer and discussed at a MDT meeting by year of incidence .....28

Figure 4 – Percentage of patients diagnosed with one invasive tumour and discussed during a MDT meeting within the 3-month before and 3-year after diagnosis .....29

Figure 5 – Percentage of patients discussed in a MDT meeting per combined Stage - Incidence year 2011...29

Figure 6 – Percentage of patients discussed in a MDT meeting per age category - Incidence year 2011 .....30

Figure 7 – Percentage of patients having been discussed at a MDT meeting with missing stage (clinical and/or combined) – Incidence year 2011 .....30

Figure 8 – Percentage of MDT meetings by number of specialists registered – Year of MDT meeting 2010 to 2012 .....32

Figure 9 – Participation rate per specialism – Breast Cancer .....33

Figure 10 – Participation rate– All cancers (Year of MDT meeting 2011) .....34

Figure 11 – Percentage of MDT meetings with registered external specialist – MDT meeting year 2004-2011 .....35

Figure 12 – Percentage of patients discussed in a MDT meeting by MDT meeting type - Incidence year 2011 .....36

Figure 13 – Number of patients discussed during a MDT meeting – Invasive breast cancer (Incidence year 2009 – 2010 and MDT meeting year 2010) .....38

Figure 14 – Percentage of clinical stage not reported to Belgian Cancer Registry – Invasive breast cancer....39

Figure 15 – Primary MDT meetings realized in 2011: percentage booked in the same year – analysis per hospital .....45

Figure 16 – Number of MDT meetings per acute hospital (primary, follow-up, second opinion) realised in 2011 .....46

Figure 17 – Specialty of MDT meeting coordinator by type of hospital - 2011 .....47

Figure 18 – Percentage of MDT meetings coordinated by oncologist – per hospital - 2011 .....48

Figure 19 – Percentage GP participation per hospital - 2011 .....50

Figure 20 – Percentage oncologist as coordinator or participant per hospital attending a MDT meeting - 2011 .....52

Figure 21 – Number of respondents to the web survey .....60



Figure 22 – General and specific MDT meetings by size of the hospital .....	65
Figure 23 – Specific last MDT meeting by cancer type (N=797) .....	66
Figure 24 – Professional profile of the participants of the last MDT meeting (internal to the hospital/site and external) (N=1 014).....	68
Figure 25 – Clinical stage defined (N=975) .....	70
Figure 26 – Pathological stage defined (N=978) .....	71
Figure 27 – Recommendations used to guide the treatment strategy during the last MDT meeting (N=1 014).....	72
Figure 28 – The utility of the guidelines during the last MDT meeting according to physicians (N=839).....	72
Figure 29 – Check of the adherence of the decision to the oncological handbook (N=25).....	73
Figure 30 – Support during last MDT meeting (N=1 014) .....	74
Figure 31 – Perception of several quality aspects of the discussion in MDT meetings (N=1 014) .....	75
Figure 32 – Perceived advantages of MDT meetings (N=1 014) .....	76
Figure 33 – Barriers to an efficient MDT meeting (N=1 014).....	77
Figure 34 – Sufficient preparation time (N=832).....	78
Figure 35 – Invitation of the GP to the MDT meeting (according to MDT meeting coordinators and CSO) (N=304).....	78
Figure 36 – Frequency of the GP's presence in MDT meetings (N=1 014) .....	79
Figure 37 – Information of the GP of MDT meeting results according to onco-coaches/CSO's and coordinators of MDT meeting (N=304) .....	80
Figure 38 – Main themes influencing the GP's role in the MDT meeting .....	104



## LIST OF TABLES

Table 1 – Maximal reimbursement of a first MDT meeting per discussed case .....	14
Table 2 – Financing of manpower based on number of MDT meetings (Cancer Plan) .....	16
Table 3 – Evolution over time of number of MDT meetings and costs for RIZIV-INAMI (2003 – 2012) .....	20
Table 4 – Types of MDT meetings (first, follow-up, supplementary) .....	21
Table 5 – Time to first MDT meeting after incidence date (in weeks) .....	31
Table 6 – Number of patients discussed during a MDT meeting and reported to BCR .....	40
Table 7 – Percentage of missing clinical stage per centre – stageable patients discussed during a MDT meeting (excluding NA stage).....	40
Table 8 – Qualification of MDT meeting participants - 2011.....	49
Table 9 – Qualification of physicians attending MDT meetings, regardless of their role (coordinator or participant) - 2011 .....	51
Table 10 – Physicians attending MDT meetings, function (coordinator or participant) per qualification - 2011	53
Table 11 – Qualification of physician who debriefs patient after MDT meeting - 2011 .....	54
Table 12 – Sociodemographic characteristics of the respondents (N = 1 014).....	60
Table 13 – Professional characteristics of the respondents (N = 1 014).....	60
Table 14 – Number of respondents per hospital and size of hospital .....	62
Table 15 – Respondents by type of hospital .....	63
Table 16 – Specialties of the medical specialist .....	63
Table 17 – Number of participants of the last MDT meeting by hospital size .....	67
Table 18 – Last MDT meeting: organizational features.....	69
Table 19 – Issues discussed during the last MDT meeting .....	71
Table 20 – Why were guidelines not useful for some patients during last MDT meeting - according to physicians .....	73
Table 21 – Availability of medical information during the last MDT meeting .....	74
Table 22 – Who informed the patient of the MDT meeting decisions - according to CSO/onco-coaches and coordinators of MDT meeting (N=304) .....	75
Table 23 – Practical aspect of the GP's invitation according to CSO's/onco-coaches and MDT meeting coordinators (N=304) .....	79
Table 24 – Does the GP contribute to the discussion? .....	80
Table 25 – How is the GP informed of the result of the MDT meeting according to CSO/onco-coach and coordinators .....	81



Table 26 – Participants of the interview study .....90  
Table 27 – Main themes for improvement ..... 107



## LIST OF ABBREVIATIONS

### ABBREVIATION

### DEFINITION

AR / KB

Arrêté Royal / Koninklijk Besluit

BCR

Belgian Cancer Registry

COM

Consultation Oncologique Multidisciplinaire

ENT

Ear, Nose, Throat

FTE

Full Time Equivalent

GP

General Practitioner

ICD

International Classification of Diseases

IMA

Intermutualistic Agency

INAMI / RIZIV

Institut National d'Assurance Maladie-Invalidité/ Rijksinstituut voor Ziekte- en Invaliditeitsverzekering

MDT

Multidisciplinary Team

MOC

Multidisciplinary Oncological Consultation



## ■ SCIENTIFIC REPORT

# 1 INTRODUCTION, OBJECTIVE AND RESEARCH QUESTIONS

## 1.1 Introduction

The diagnosis and treatment of cancer patients is a complex, rapidly and continuously evolving science. While the number of available therapeutic options is getting larger, the number of different health professionals to treat the patient is also expanding. A “typical” patient with cancer will be in contact with numerous specialists: a medical internist of the organ affected, a surgeon specialized in the surgical treatment of the organ affected, a medical oncologist, a specialist in medical imaging (perhaps two if nuclear imaging is involved), a specialist in pathology, a specialist in radiotherapy and sometimes a specialist in genetics. In addition to these physicians, the patient may also benefit from the support of other health professionals: a nurse specialised in oncology, a psychologist, a social worker, a dietician. And ideally, this staff should keep in touch with the patient’s general practitioner. As a consequence, when the number of actors around the patient increases, the potential for miscommunication, poor coordination between healthcare providers and fragmentation of services increases accordingly. This constitutes a major challenge for caregivers and for patients.<sup>1</sup>

Multidisciplinary teams (MDTs) meetings were created as a response to this challenge. MDT meetings, as the name suggests, allow specialists from different disciplines to form and to unite the best possible team to achieve optimal care for a cancer patient. The purpose of the MDT meetings is to develop a strategic plan of diagnosis, treatment and follow-up and to discuss the overall care of an individual patient.<sup>2</sup> MDT meetings were identified as the best approach to organise cancer care in a way that consistently brings together all healthcare professionals involved in cancer diagnosis and treatment<sup>3</sup> and in 2014, the European Partnership Action Against Cancer (EPAAC) published a policy statement on multidisciplinary cancer care which was endorsed by the majority of European scientific societies, patient organisations and stakeholders. In this policy statement, MDT meetings are described as follows:



### What are MDT meetings in oncology?

Multidisciplinary team (MDT) meetings are an alliance of all medical and healthcare professionals related to a specific tumour disease whose approach to cancer care is guided by their willingness to agree on evidence-based clinical decisions and to coordinate the delivery of care at all stages of the process, encouraging patients in turn to take an active role in their care.<sup>1</sup>

In Belgium, MDT meetings have been reimbursed since 2003 by the RIZIV-INAMI for all cancer types. It was one of the first examples of the reimbursement of shared intellectual activity involving different specialties. It acknowledged the added value of multidisciplinary work to the quality of care.<sup>4</sup> In 2008 the Belgian Cancer Plan identified the MDT meeting as an essential step in the clinical pathway of each new cancer patient,<sup>5</sup> and extra financial fees were added for the oncologist attending or coordinating the meeting. Nevertheless, the requirement has not been translated officially into legal texts,<sup>6</sup> and in daily practice there is quite some variability as some cancer types are not systematically discussed during a MDT meeting.<sup>7</sup> There are, however, financial incentives to do so: the financing of supportive staff members in the oncological centres (i.e. psychologists, nurses, social workers, dieticians and data managers) is directly based on the number of MDT meetings reimbursed in the centre.<sup>5</sup>

Today, there is a consensus that the MDT meetings do improve the quality of cancer care by strengthening the communication between different health professionals, and that this practice should be facilitated as much as possible. At present, however, there is not much known about the variability between hospitals in the organisation of the MDT meetings. Little information is available to which extent all new cancer patients are effectively discussed, and to which extent these discussions are really efficient, specific and patient-centred. This report aims to provide answers to these questions.

## 1.2 Objectives and research questions

The objectives of this report, which has been commissioned by the RIZIV-INAMI, are to provide a global picture of the use of MDT meetings in Belgium, ten years after the start of their reimbursement, to identify areas of improvement and formulate recommendations to policy makers accordingly. This objective has been elaborated around the 4 following research questions:

1. What is the evolution in the practice of MDT meetings? What is the corresponding evolution in the costs for the RIZIV-INAMI budget?
2. Are all cancer patients equally benefiting from the MDT meeting? Which factors influence the chances of a case being discussed during a MDT meeting?
3. Today, how are these meetings organized in the hospitals? What are the barriers and opportunities for a more efficient organization of the MDT meetings?
4. What are the role and expectations of the GPs with regard to the MDT meeting? How can GP participation at the MDT meetings be improved?

## 1.3 Structure of this report

The **first chapter** presents the general context of the study, the objectives and research questions.

The **second chapter** describes background information about MDT meetings in Belgium: the legislation, the Cancer Plan, and the evolution of use and charges at a national macro level.

The **third chapter** presents a detailed analysis of Belgian Cancer Registry data linked to sickness funds billing data for 7 cancers (breast, prostate, rectum, lung, soft tissue sarcoma, malignant melanoma and acute leukaemia). The number of patients discussed at MDT meeting, timing of the discussion, number and qualification of participants are described. This chapter is exclusively based on nationally available administrative data, with their inherent limitations (mainly the fact that they represent only what was billed to the sickness funds).



The **fourth chapter** presents an analysis performed by experts at RIZIV-INAMI, who have analysed how administrative billing data can be used to identify outlying patterns in the use of MDT meetings.

To enrich the analysis with the views and perceptions of actors in the field, a national web survey has been carried out during the spring 2014. More than 1000 health professionals, mainly medical specialists, have provided information on how the MDT meetings are being organised in their hospitals, and their perception of the MDT meetings' functioning. The results of this web survey are presented in the **fifth chapter**.

In the **sixth chapter**, the (lack of) attendance of GPs in the MDT meetings is further investigated, by a series of extended interviews of GPs who did attend MDT meetings. These interviews and analyses have been performed by a consortium of 2 university teams from UGent and ULG.

The discussion of the above chapters, the conclusions and the policy recommendations are not presented in this report, but can be found in the scientific summary which accompanies this report, and which is also available on the KCE website.

## 2 BACKGROUND INFORMATION

### 2.1 The Belgian context

#### 2.1.1 Evolution of billing codes and accessory legislation

The billing codes concerning the MDT meetings have been developed in 2003 and adapted in 2010, as summarized below and detailed in appendix A (description of billing codes and list of Royal Decrees referring to oncology).

In 2003, three billing codes (one for the coordination, 2 for the participation) were created, concomitantly with the creation of the programs of care in oncology. A MDT meeting can only be billed once per calendar year, and is composed of minimum 3 specialists, with a maximum 4 specialists (intra-muros, including the coordinator of the MDT meeting) who can receive reimbursement for attendance at the MDT meeting.

In 2010 an important change was introduced in the billing codes. It concerns the specification of 3 different MDT meeting types: the **first MDT meeting**, which can be billed once at the diagnosis phase, the **follow-up MDT meeting** which can be billed "if required by the evolution of the disease and treatment plan" and gets a lower reimbursement (K50 instead of K80), and a second advice MDT meeting (**supplementary MDT meeting**), which can be billed by a hospital where the patient is referred to. The restriction of one MDT meeting per calendar year disappeared in 2010, and the maximum number of intra-muros specialists reimbursed increased from 4 to 5 (including the coordinator of the MDT meeting). Also in 2010, a new billing code was introduced, and allowed some specialists (medical oncology, haematology, paediatric oncology and paediatric haematology) to receive a supplementary fee when attending or coordinating the MDT meeting.

More details are presented in the following section.



### 2.1.1.1 *Legal specification for the reimbursement of MDT meetings*

#### **Who initiates/asks for the MDT meeting?**

To be discussed at the MDT meeting, a written request has first to be sent by the treating specialist of the patient, or possibly by his/her GP. Specialists in pathology, clinical biology or radiology cannot initiate a MDT meeting.

#### **What is the role of the coordinator of the MDT meeting?**

One of the attending physicians takes the role of coordinator of the MDT meeting. S/he writes the report of the MDT meeting, which describes the diagnosis, the prognosis, and the treatment plan, on the short and long term, taking into account medical aspects, but also psycho-social aspects. This report also contains the names of all participants (even if their number exceeds 5), and the name of the requesting physician.

This written report, signed by the coordinator of the MDT meeting, has to be transmitted to

- All physicians who attended the meeting
- The requesting physician
- The GP of the patient (if s/he was not the requesting physician)
- The advisory doctor from the patient's sickness fund

#### **Who attends the MDT meeting?**

At least 4 specialists from different specialities need to physically attend the meeting. At least one of them has to

- have surgical expertise in oncology
- or have the recognition in medical oncology
- or have the recognition in radiotherapy
- or have the recognition of clinical haematology or paediatric haematology and oncology

One of the attending physicians takes the role of coordinator of the MDT meeting (see below) and the others are "participating" physicians. More than 4 participants can be present, but reimbursement will be limited to 4.

In addition to these participants, there is a specific code for a specialist from another hospital or for the GP of the patient. Specialists from another hospital who usually attend the MDT meeting (e.g. radiotherapist, medical oncologist) are already counted in the participating physicians above.

#### **Attendance at the MDT meetings**

From 2010 on a **maximum of 6 physicians can attest the attendance of the MDT meeting:**

- 1 coordinator
- 4 participants who belong to the hospital staff (intra-muros participants)
- 1 participant extra-muros (the GP or the treating specialist of the patient, if s/he's not part of the hospital team)


**Table 1 – Maximal reimbursement of a first MDT meeting per discussed case**

What?	Qualification	K	Max N	Fee 01/02/2014	Total
<b>Coordination</b>	Specialist	K80	1	95.11 €	€ 95.11
<b>Participation</b>	Specialist	K17	4	20.21 €	€ 80.84
<b>Total</b>			<b>5</b>		<b>€ 175.95</b>
<b>In the case of attendance by...</b>	Specialist outside hospital or GP	K25	1	29.72 €	
<b>If additional fee</b>	Coordination by oncologist	K15		17.83 €	
<b>Total</b>			<b>6</b>		<b>€ 223.5</b>

### Which MDT meeting types are specified?

#### First MDT meeting

A first MDT meeting is mandatory in some specific situations well described in the AR-KB. Only in the specific case of patients with breast cancer treated in a recognized breast clinic is the practice of a MDT meeting mandatory.<sup>6</sup>

Mandatory, and eligible for reimbursement

- For every oncological treatment which deviates from the written guidelines of the oncological centre (manual of oncology).
- For a repetition of a series of irradiations in the same target zone, starting within 12 months after the start of the first series of irradiations
- For chemotherapy with a drug which, in its first reimbursement phase, has been designated by the CTG to be monitored by the MDT meeting

Not mandatory, but eligible for reimbursement

- For every patient with a new diagnosis of cancer, except the cases mentioned below.

Not eligible for reimbursement

- uncomplicated basal cell carcinoma of skin (BCC)
- uncomplicated squamous cell carcinoma of the skin (SCC).

#### Follow-up MDT meeting

A follow up COM can be billed when

- The follow-up of the treatment requests the revision of the diagnosis and/or a change in the treatment plan

And/or

- To repeat a series of irradiations within 12 months after the start of the first series of irradiation

The “change in the treatment plan” has to be interpreted in a restricted way and used with parsimony: it only refers to a change in the treatment plan where a multidisciplinary decision is required. Changes in the chemotherapy or radiotherapy plan treatment or in palliative care is the responsibility of the treating specialist, and does not necessarily require a follow-up MDT meeting.



### Supplementary MDT meeting

If the result of the MDT meeting cannot lead to a definitive diagnosis or to a concrete treatment plan, the team can decide to refer the patient to a hospital with more expertise (and with a care program in oncology). The name of this hospital has to be mentioned in the MDT meeting report. If the patient decides to go to another hospital (e.g. for referral or for second opinion), and the name of that hospital is not explicitly mentioned on the MDT meeting report, this hospital will not be reimbursed for the supplementary MDT meeting.

#### 2.1.1.2 *Medico-legal issues related to MDT meeting*

Traditionally, a doctor-patient relationship reflects a one to one relation, where mostly face-to-face interactions occur. The shift towards a team approach, such as in multidisciplinary oncological team discussions, where patient cases are jointly discussed raise some concerns about the medico-legal implications. In Belgium as well as internationally, lawsuits involving medico-legal liability related to the outcome or the process of MDT meetings are unknown, which suggest that probably the risk for lawsuits in this matter is rather low. Yet, clarity on which patients should be discussed at the MDT meetings, the status of the decisions of the MDT meetings and the accountability of the participants for the decisions that were taken and about the implementation of these decisions is important to avoid defensive behaviour creating a barrier to this kind of multidisciplinary approach.

#### Referral of patient cases to MDT meetings

Today MDT meetings are not obligatory for Belgian hospitals. If MDT meetings are organized it is usually the treating physician who will decide on the referral of the patient to a MDT meeting. There are no uniform criteria for which patients should be discussed. Therefore, the documentation of the reason of non-referral of a patient to a MDT meeting could help to streamline a uniform approach and could serve as evidence in possible lawsuits.

#### Patients' informed consent

Patient consent needs to be obtained for every intervention of a healthcare professional (art. 8 Belgian Patients' Rights Act<sup>8</sup>). When considering the referral of a patient case to a MDT meeting, patients (or their legal

representative) need to understand the purpose of the MDT meeting, the possible disciplines present (observational or participating in discussion) and the medical and non-medical information that will be shared within the team.<sup>9</sup> Patients discussed during the MDT meetings are protected by the principles of confidentiality of the doctor-patient relationship (professional secrecy – art. 458 Belgian Penal Code). Traditionally professional secrecy applies in the doctor-patient relationship or in the relationship patient-medical team (shared professional secrecy).<sup>10, 11</sup> During the MDT meeting, however, several participants -in particular in general MDT meetings- will possibly be involved or attending discussions on patients they have no medical relation with and/or where the patient is personally known by a team member. Therefore it is of utmost importance that patients are informed on the team that will be present at the MDT meeting. Patients should be offered the option to indicate the information they do not wish to share.<sup>9</sup> A possible option for the healthcare professionals concerned to avoid conflicts of interest is the possibility not to take part in the decision making or not to attend when the case of the patient they are familiar with is discussed.<sup>9</sup>

#### Accountability for MDT meeting decisions

The fundamental legal principle underlying a professional patient-doctor relationship is the duty to take reasonable care for the patient. The lack of reasonable care can lead to medical liability if this has caused an injury or other damage to the patient. As patient cases in MDT meetings are discussed in team, the question arises if and with whom the patient has a doctor-patient relationship. Furthermore, as the MDT meeting team has no legal personality the question arises who can be held liable in case of malpractice. According to the literature, each doctor is individually responsible and potentially liable for the decisions within his/her area of expertise.<sup>12, 13</sup> This implies that if MDT meeting participants do not agree with the proposed recommendation resulting from the MDT meeting discussion, this should be noted in the MDT meeting report. Possibly an alternative recommendation could be documented. Overall, the documentation of the treatment plan, the participating members and possible dissenting opinions are of utmost importance. In that scope the availability of sound systems and tools to support the process are primordial (cfr. supra).



### 2.1.2 The Cancer Plan and the financing of extra manpower in oncological centres

Since July 1<sup>st</sup> 2008, the Cancer Plan offers financial support to hospitals having a certified oncological care program<sup>a</sup> by financing extra manpower to support patients with cancer: nurses in oncology (a recognized function since 2009, Cancer Plan Action 14<sup>14</sup>), onco-psychologists, social workers (Cancer Plan Action 10), data managers (Cancer Plan Action 11) and since January 2011 also dieticians. The FTE of the extra manpower are calculated based on the number of MDT meetings reimbursed in the hospital.

In 2012, 1 070 full time equivalents (FTE) were financed: 330 nurses in oncology, 330 onco-psychologists, 165 social workers, 163 dieticians and 82 data managers. <sup>14</sup>For a medium size hospital which would perform 500 MDT meetings per year, this corresponds to 6.5 FTEs (see Table 2).

#### Computation of FTEs

There has been an evolution in the way FTE were calculated. For the period 2008-2010, the number of FTE were calculated each year based on the last available number of MDT meetings reimbursed (usually 2 years before, so FTE financed in 2008 were calculated based on number of MDT meeting reimbursed in 2006). From 2011 onwards, the computation was not done per year, but was valid for a period of 3 years. Thus for 2011, 2012 and 2013, reimbursement data from 2009 have been used, without taking into account the change in billing codes from 2010. For 2014 (and 2015-2016), a new way of computation will be put in place, but this is not yet known at the moment.

#### Function Description

The role of the data manager is described in the law: the data manager is responsible for collecting and sending the required data to the Belgian Cancer Registry, for the evaluation of adherence to the recommendations of the hospital manual of oncology and also for the evaluation of the good implementation of the decisions of the MDT meeting where he/she assists.

<sup>a</sup> This encompasses the care programme for basic oncological care (le programme de soins de base en oncologie - het zorgprogramma voor

The exact function of the nurses in oncology, psychologists, social workers and dieticians are not legally described, and interpretations of the role of the different actors vary across hospitals.<sup>15</sup>

**Table 2 – Financing of manpower based on number of MDT meetings (Cancer Plan)**

Specialty	Manpower	In 2012, FTE financed by Cancer Plan	Example FTE for 500 MDT meetings/year
<i>Supportive staff oncological centre</i>			
Onco nurse	1 FTE/250 MDT meetings	330	2
Onco psychologist	1 FTE/250 MDT meetings	330	2
Social worker	1 FTE/500 MDT meetings	165	1
Dietician	1 FTE/1-500 MDT meetings*	163	1
<i>Data collection and registry</i>			
Data manager	1 FTE/1000 MDT meetings	82	0.5
<b>Total</b>		<b>1 070</b>	<b>6.5</b>

\* with ½ FTE /250 additional MDT meetings, and maximum 4 FTE per hospital

oncologische basiszorg) and the oncology care programme (le programme de soins d'oncologie - het zorgprogramma voor oncologie).



### 2.1.3 Information flows between hospitals, the Belgian Cancer Registry and the sickness funds

There are three main actors involved in the data collection of cancer incidence data and MDT meeting reports: the hospitals, the Belgian Cancer Registry (BCR) and the sickness funds. Different documents or registration forms are necessary (see list below).

Hospitals have to register all new cancer diagnoses<sup>b</sup>, irrespective of the fact that the diagnosis is discussed during a MDT meeting, using the template of annex 55 (see appendix A). Paper registration 'only' by the hospitals is strongly discouraged (in 2014, only 2 hospitals still transfer their information on paper). Sending an electronic file with all data on a yearly basis, or direct registration via the online Web Based application for Cancer Registration (WBCR) are more straightforward.<sup>16</sup> Cancer registration is typically done by data managers, who are financed by the Cancer Plan. Legally, the registration of cancer cases is one of the responsibilities of the coordinator in oncology (Note: there is one coordinator per oncological centre).

Document	Content	Coverage	Recipients
<b>Annex 55</b>	Registration form for a new cancer case	Mandatory for all patients	BCR and sickness funds
<b>Annex 55 (bis)</b>	List of participants attending the MDT meeting	Mandatory to receive reimbursement of the MDT meeting	Sickness funds
<b>Annex 55 (ter)</b>	Registration form to declare a recurrence of a cancer (follow-up)	when patient discussed at MDT meeting	BCR and sickness funds
<b>MDT meeting Report (no formal template)</b>	Written report of the MDT meeting	Mandatory to receive reimbursement of the MDT meeting	Sickness funds

<sup>b</sup> The registration of new cases of cancer includes all malignant tumours (in situ and invasive), all haematological tumours (including myeloproliferative neoplasms and myelodysplastic syndrome), all tumours of the central

If a patient is discussed during a MDT meeting in a hospital, 5 documents have to be sent (on paper) to the advisory doctor of the regional sickness fund of the patient:

1. The MDT meeting request
2. Annex 55 (the form to register a new cancer case)
3. The MDT meeting report (which is different from annex 55, and should contain more detailed information)
4. The list of attending participants and their signature
5. The billing request

The regional sickness funds perform administrative controls. Basically they check if the MDT meeting was not already billed for this patient by another hospital; in that case it refuses the reimbursement of the MDT meeting in the second hospital. Sickness funds also transfer all documents to the national sickness funds, which then gather and transfer all required documents to the Belgian Cancer Registry. They are not electronically encoded, but are used as source of information if inconsistencies spotted in the data.

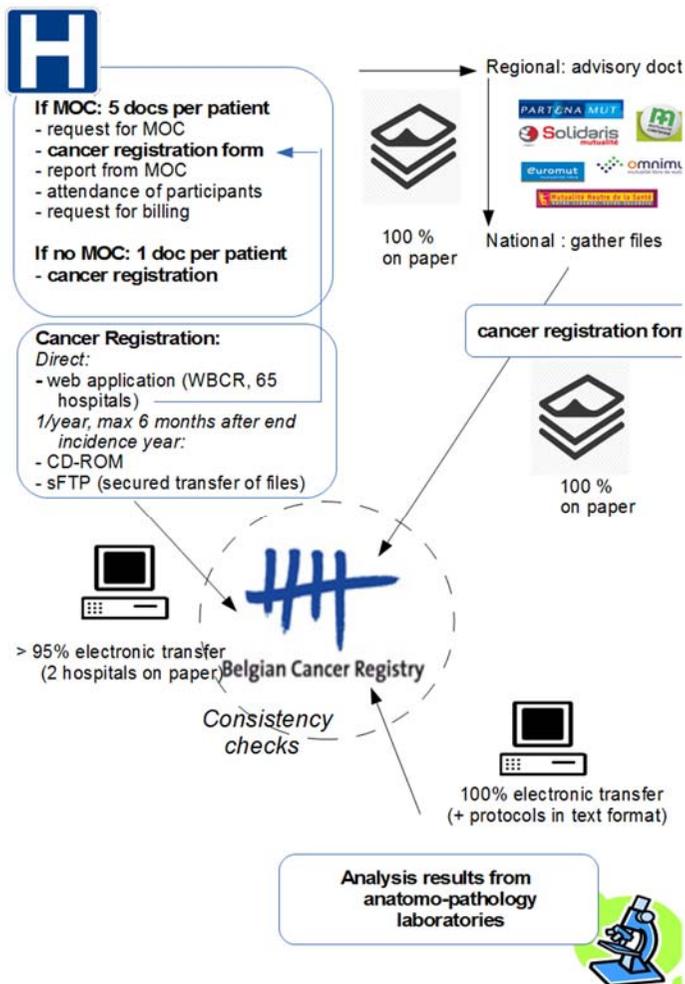
The other source of information, in addition of the clinical network described above (hospitals sending cancer data directly to BCR) is the pathological network.<sup>16</sup> The pathology laboratories encode the received specimens following classification rules approved by the Consilium Pathological Belgicum. In Flanders most of the laboratories follow the Codap-2007 classification. Various coding systems are used in the Walloon and Brussels Capital Region. Every (pre) malignant diagnosis is encoded and yearly transferred to the BCR, accompanied by the protocols as stated in the law.

These data (clinical and pathological) are then linked by patient, and quality control and consistency checks are performed. In more complex cases, the data source is consulted to provide additional information.

nervous system (benign, malignant, borderline), all urothelial tumours (low malignant potential, in situ et invasive), all ovarian tumours (borderline and malignant).



Figure 1 – Data flows between hospitals, sickness funds and the Belgian Cancer Registry



### 2.1.4 Evolution in number of MDT meetings and costs

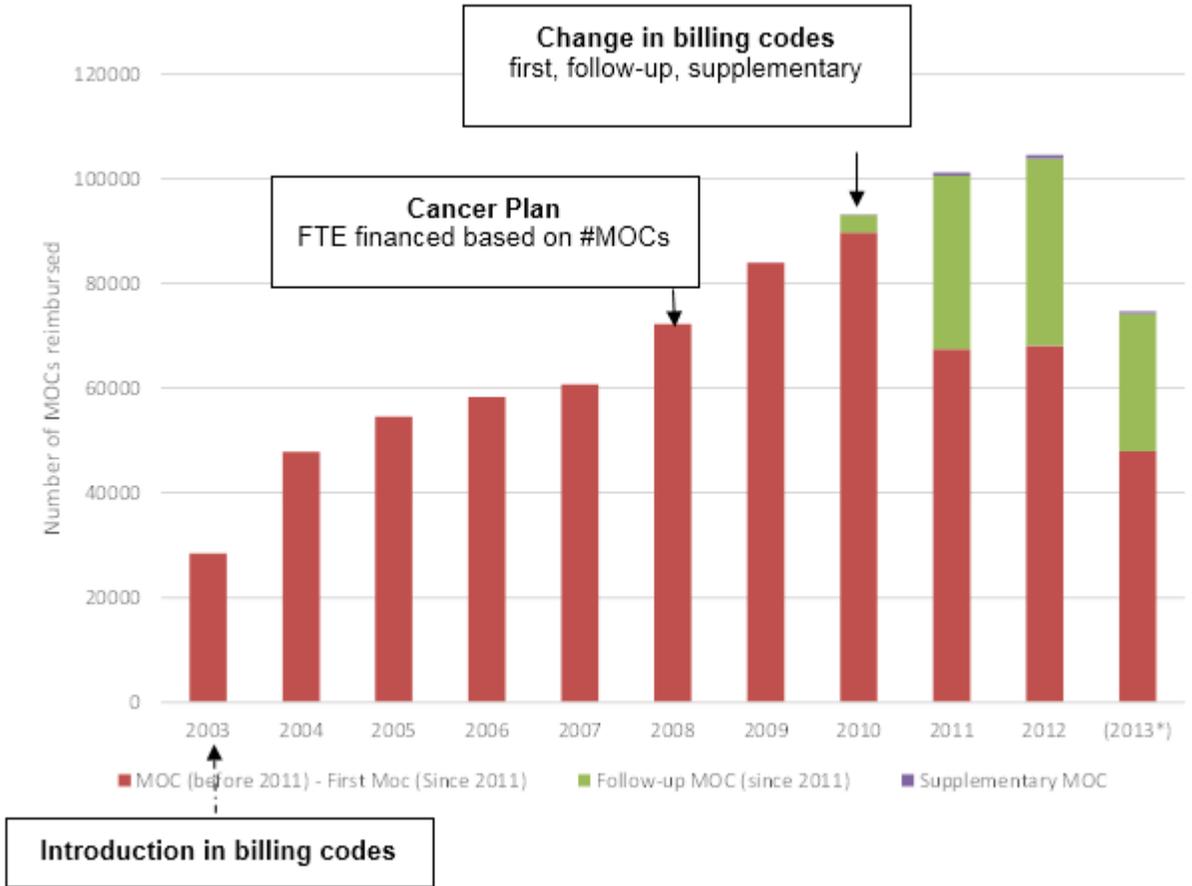
Figure 2 and Table 3 present the evolution in use of MDT meetings between 2003 and 2013 (2012 data are almost complete, and 2013 data are given for indication only).

In 2012, 104 530 MDT meetings were reimbursed, of which 65% were first MDT meetings (N=68 142, which is more that the number of new cancers diagnosed in Belgium, 64 301 in 2011<sup>17</sup>), 34% were follow-up MDT meetings (N=35 743), and less than 0.6% (N=645) were supplementary MDT meetings (Table 4).

The charges for RIZIV-INAMI in 2012 amounted to € 16.6 million, thus on average € 160 reimbursed per MDT meeting per patient.



Figure 2 – Evolution of number of MDT meetings (2003-2013)



Source: RIZIV-INAMI (DOC N, update August 2014, includes booking data 4Q2013), KCE calculation (year based on MDT meeting date), (2013)\* data not yet complete



**Table 3 – Evolution over time of number of MDT meetings and costs for RIZIV-INAMI (2003 – 2012)**

Year	# MDT meetings	% increase in # of MDT meetings	€ (total)	€ /MDT meeting/patient
<b>2003</b>	28 350		3 875 029	136.7
<b>2004</b>	47 783	68.5	6 567 018	137.4
<b>2005</b>	54 548	14.2	7 420 868	136.0
<b>2006</b>	58 291	6.9	8 096 502	138.9
<b>2007</b>	60 744	4.2	8 603 825	141.6
<b>2008</b>	72 248	18.9	10 352 560	143.3
<b>2009</b>	83 980	16.2	12 563 093	149.6
<b>2010</b>	93 241	11.0	14 181 072	152.1
<b>2011</b>	101 171	8.5	15 761 252	155.8
<b>2012</b>	104 530	3.3	16 578 724	158.6
<b>(2013*)</b>	74 587	-28.6	11 949 968	160.2

Year = year of the MDT meeting, #MDT MEETINGS based on number of first, follow up and supplementary MDT meetings, € total includes all reimbursed for MDT meetings (coordination, participation, additional fees)

Source: RIZIV-INAMI (DOC N, update August 2014, includes booking data 4Q2013), KCE calculation (year based on MDT meeting date)  
(2013\*) data not yet complete

**Table 4 – Types of MDT meetings (first, follow-up, supplementary)**

Year	First meeting		MDT Follow-up meeting		Supplementary MDT meeting		Total
	N	%	N	%	N	%	
<b>2011</b>	67 397	66.6	33 221	32.8	553	0.5	101 171
<b>2012</b>	68 142	65.2	35 743	34.2	645	0.6	104 530
<b>(2013*)</b>	47 907	64.2	26 372	35.4	308	0.4	74 587

Year = year of the MDT meeting

\*Data for 2012/2013 not complete yet

Source: INAMI-RIZIV (DOC N, update August 2014, includes booking data 4Q2013), KCE calculation (year based on MDT meeting date) (2013\*) data not yet complete

## 2.2 The international context – what we learn from the literature

### 2.2.1 Variable MDT practice around the globe

The use of multidisciplinary teams (MDTs) in cancer care is endorsed internationally, but its uptake varies considerably. MDT practice is well established in the United Kingdom (UK), Europe, Australia and Canada, as well as in parts of the United States (US); however, it is a less common model of care in Asia.<sup>18</sup> A survey among 152 investigators in breast cancer from 39 countries revealed that 65% of the eastern European respondents, 63% of the western European, 35% of the Asian and 25% of the South American respondents declared that MDTs were a mandatory part of breast cancer care in their country.<sup>19</sup> The majority (90%) of European respondents reported that their MDTs met weekly, compared with only half of the respondents from Asia.<sup>19</sup>

In Australia multidisciplinary meetings are a central focus of multidisciplinary care.<sup>20</sup> National guidelines suggest the treatment plan should include all therapeutic options discussed and, ultimately, a preferred treatment strategy. The plan is then discussed with the patient and modified according

to individual preferences. This approach should result in evidence-based practice that is individualized for the particular patient. It also incorporates shared decision making, which is preferred by patients and is a component of quality cancer care.<sup>20</sup>

In France, certain quality criteria for multidisciplinary cancer meetings (e.g. at least three specialists, at least two meetings per month, regular evaluation of the multidisciplinary meetings) have been described precisely in the cancer plan and in legal documents ('circulaires').<sup>21</sup>

Canada has state-defined guidelines for the use of multidisciplinary teams in cancer care.<sup>18</sup> Cancer Care Ontario for instance published multidisciplinary cancer conference (MCC) standards in 2006 to guide the development of MCC, taking into account the different circumstances in regional centres and in community hospitals of various sizes (<http://www.cancercare.on.ca>). In 2007, Wright et al. reported that in Ontario very few hospitals had developed cancer conferences or forums for the prospective discussion of patient cancer care.<sup>22</sup>

In the England and Wales the impetus for the widespread introduction of multidisciplinary cancer care began with the 1995 Calman-Hine report.<sup>23</sup> The report recommended major organisational changes, including more team working among those providing treatment and care; multidisciplinary consultation and management were judged as essential.<sup>23, 24</sup> Nowadays, all multidisciplinary teams submit self-assessments to a national database and a sample is validated by an external peer review team (clinicians, users, commissioners, and managers), who may also visit the teams.<sup>25</sup>

### 2.2.2 Benefits of multidisciplinary meetings/settings

Intuitively multidisciplinary care should be associated with better patient related outcomes. A Scottish study for instance linked a significant survival benefit in breast cancer survival to multidisciplinary care, over and above improvements expected to occur in the absence of multidisciplinary care.<sup>26</sup> Improved survival thanks to the multidisciplinary setting has also been illustrated for e.g. colorectal cancer (thanks to a significant increase in patients undergoing adjuvant postoperative chemotherapy<sup>27</sup>), inoperable non-small cell lung cancer,<sup>28</sup> prostate cancer,<sup>2</sup> head & neck cancers<sup>29</sup> and ovarian cancer;<sup>30</sup> others failed to see any significant impact on clinical outcomes.<sup>31, 32, 33, 34</sup> According to Lamb et al. it is not surprising that some



studies failed to show improved clinical outcomes as a direct result of the introduction of MDT meetings; it may have several reasons: clinical outcomes for cancer patients are multifactorial and MDTs are only one part of a complex care process.<sup>35, 36</sup> Also, the quality of MDTs can be variable<sup>37</sup> as well as the team decision-making process and the ability of the team members to work together to reach the best treatment schemes for the patient.<sup>35, 36</sup> In addition, traditional health professional hierarchies with e.g. nursing personnel not having the opportunity to participate actively in the discussions may lead to decisions where patient's choices and psychosocial issues are hardly incorporated.<sup>38, 39</sup> Lack of information (availability of proper imaging, histopathological information) may also add to suboptimal functioning of the MDTs.<sup>40</sup>

Nevertheless, there is an abundance of literature that documents that MDTs may be beneficial for several aspects of cancer care:

- *Clinical decision making*: increased likelihood that individual patients are offered the most appropriate treatment for their condition, because management plans are based on a broad range of expert knowledge from the start, and all aspects that influence treatment options are considered;<sup>24, 41, 42</sup> revision of cancer diagnoses and of treatment plans in new cancer cases;<sup>43, 44</sup> improved staging accuracy and treatment selection;<sup>45, 46</sup> MDT discussion as an independent predictor of receiving radiotherapy, chemotherapy and referral to palliative care;<sup>34</sup> better adherence to evidence-based guidelines;<sup>47-49</sup> supporting evidence based decision making;<sup>50</sup> sparing patients from unnecessary surgery;<sup>50</sup>
- *Clinical outcomes*: improved survival for several cancer types (cfr. supra); reduced variation in survival among hospitals for breast cancer;<sup>26</sup> significantly reduced rate of positive surgical margins after MDT discussion of staging with magnetic resonance imaging and subsequent preoperative treatment recommendations;<sup>51</sup>
- *Coordination and continuity of care*: decreased time from diagnosis or presentation to initiation of treatment;<sup>52, 53</sup> simplification of referral processes between health professionals, and avoidance of the duplication of examinations and investigations;<sup>54</sup> better awareness among team members of efficient ways of treatment planning;<sup>54</sup> ensuring appropriately timed surgery;<sup>50</sup>

- *Communication*: assist in communication and information sharing between healthcare professionals, particularly between hospital-based specialists and primary care providers, which enhances referral and continuing care pathways;<sup>24</sup>
- *Clinical trial recruitment*: increased recruitment into clinical trials;<sup>55, 56</sup>
- *Staff wellbeing*: excellent opportunity for training doctors and nurses;<sup>20</sup> the mutually supportive environment experienced as beneficial, especially in complex cases<sup>57</sup>; improved education and collegiality for members of the MDT;<sup>58</sup>
- *Patient wellbeing*: increased patient satisfaction by encouraging involvement of patients' families and friends and by helping patients make treatment decisions;<sup>59</sup> dissemination of information about support groups;<sup>43</sup> more consistent information for the patient, as each team member is aware of their own and other team members' roles when they provide information to patients.<sup>24</sup>

After having reviewed the literature, Patkar and colleagues (2011) concluded that the paucity of good-quality evidence to support the use of the MDT meetings in different tumour contexts should not be interpreted as evidence of ineffectiveness.<sup>60</sup> One of the main reasons for the paucity of the data is the practical difficulties in setting up conventional randomised controlled trials for complex interventions like MDT meetings, while simultaneously other organizational changes (e.g. centralization, increased caseload, streamlining of clinical pathways, and appointment of new specialists) are being instituted. Moreover, since cancer MDT meetings have already been established as a standard of care in many healthcare systems, new RCTs are very unlikely.<sup>60</sup>



### 2.2.3 Barriers and obstacles for efficient multidisciplinary meetings/settings

As multidisciplinary team meetings have been installed in several countries, quite some attention has been paid in the international literature to the potential barriers. The following are described:

- *Workload*: participants spend an enormous amount of time in meetings and preparing for the meetings;<sup>61</sup>
- *Attendance*: poor attendance by key staff;<sup>24</sup> inconsistent participant interest and attendance;<sup>62</sup> lack of protected time;<sup>36</sup> staff shortages;<sup>63</sup> allied health professionals not invited as the main focus is nursing and medical care;<sup>50</sup>
- *Logistics and organisational aspects*: difficulty in coordinating the availability of material for review;<sup>61</sup> the exchange of patient materials with outside institutions is a cause for concern when full data are not made available in a timely fashion;<sup>61</sup> insufficient administrative support;<sup>24, 50</sup> deficient record keeping;<sup>24</sup> lack of availability of a consistent venue;<sup>62</sup> no fixed sessional time;<sup>62</sup>
- *Team work and communication*: hierarchical boundaries;<sup>24</sup> disagreement;<sup>64</sup> communication amongst subgroups (e.g. surgeons) during the meeting; unequal participation in decision making e.g. nurses reporting that they were marginalised and their contribution of patient-centred information ignored;<sup>64</sup> lack of a dedicated clerk or MDT coordinator;<sup>62</sup> not having a chair who is experienced, inclusive, respectful and efficient;<sup>50</sup> lacking good leadership, which is necessary to foster inclusive case discussions;<sup>64</sup>
- *Information*: lack of information at meetings to support decision making;<sup>24</sup> lack of personal knowledge of the patient;<sup>64</sup> lack of information on co-morbidities.<sup>64</sup>

In general, participants of MDT meetings acknowledge the merits of these meetings and view them positively. Yet several aspects can improve the meetings' efficiency and efficacy and ultimately enhance patient care.

### 2.2.4 Core pillars of an effective MDT meeting

In 2014 the European Partnership for Action Against Cancer (EPAAC), published a policy document in which signatories identify MDTs as the core component in cancer care organisation and set down the key elements to guide changes across all European health systems.<sup>1</sup> According to EPAAC the core pillars of an effective MDT include the following:

- Clear care objectives that have the agreement of MDT diagnostic and therapeutic members and patients, covering issues around diagnosis, treatment and survivorship;
- Organisation of the MDT that establishes operative leadership and coordination, designates a point of contact for patients, includes benchmarking exercises that integrate emerging scientific breakthroughs and reserves specific time and resources for physicians and healthcare professionals to participate on tumour boards;
- Information databases that record clinical decisions, outcomes and indicators, facilitating the assessment of progress and the identification of areas to further improve;
- Patient-centred approach, with available and comprehensible information on clinical and psychosocial aspects of the care process, clear communication channels between the care team and the patient and the promotion of participation and choice;
- Policy support from national and regional health authorities, scientific societies and patients' organisations, with special attention to including mechanisms to establish and sustain MDTs through national cancer control plans.



### 2.3 Key messages

- A MDT meeting is a scheduled meeting where physicians from different specialities gather physically to discuss together the diagnosis and treatment plan of cancer patients. The meeting can be held to discuss either the first occurrence of the cancer, either a change in the treatment plan, or at relapse. Attending specialists include typically a medical oncologist, a surgeon and a specialist from the organ affected. Other potential participants are medical imaging specialists, pathologist and specialists in radiotherapy. Several patients are discussed during the meeting.
- The MDT meetings are reimbursed since 2003. In 2010 a distinction was made in the billing codes between the first MDT meeting (at first occurrence of the cancer), the follow-up MDT meeting (at relapse or to discuss change of treatment plan, with lower reimbursement than the first MDT meeting) and the supplementary MDT meeting (when the patient is referred to another hospital for second opinion).
- The reimbursement rules foresee one coordinator, who is responsible for the written report of the discussion (the MDT meeting report) and the participation of three other specialists from the hospital staff, plus one extra physician (either the treating specialist or the patient GP).
- Discussing every new cancer patient at MDT meeting is not a legal obligation, except for patients with a breast cancer treated in a recognized breast clinic. Yet, the registration and transfer to the Belgian Cancer Registry of every new cancer case, discussed during a MDT meeting or not, is mandatory.
- Since 2003, the number of MDT meetings has continuously increased, to reach +/- 67 000 first MDT meetings in 2011. Follow-up MDT meetings were billed more than 33 000 times, and supplementary MDT meetings are virtually not billed (553 cases in 2011).
- The cost for the RIZIV-INAMI budget amounted to € 17 millions in 2011.

## 3 ANALYSIS OF BELGIAN CANCER REGISTRY AND BILLING DATA FOR 7 CANCER TYPES

### 3.1 Introduction

The purpose of the chapter is to analyse the evolution of the MDT meetings over the years from 2004 until the most recent available data (cancer incidences of 2011). More specifically, we will report the evolution regarding the coverage of patients who were discussed during MDT meetings, the characteristics of the MDT meetings themselves (number of attending specialists, time to the first MDT meeting after cancer incidence date, specialty of physicians involved) and the impact of changes introduced by the new reimbursement rules in 2010 (see Chapter 2 for more details on legal rules). First, a general analysis on all cancer patients was performed to have an overview on the coverage of MDT meetings. Secondly, it was decided to focalize on 7 different cancer types, ranging from low to high incidence rates and treated by different specialists. The 7 cancer types selected for this purpose are:

- Female breast cancer
- Prostate cancer
- Lung cancer
- Rectal cancer
- Malignant melanoma
- Acute leukaemia
- Soft tissue sarcoma



## 3.2 Methods

### 3.2.1 General methodology

#### Used databases

The databases used for this project were the database of the Belgian Cancer Registry (BCR), and the database of the Intermutualistic Agency (IMA/AIM). The BCR is population-based and includes data on all newly diagnosed malignant and in situ cases (as well as some benign lesions and lesions with uncertain or unknown behaviour) since 2004. At the date of beginning this project, the most recently available cancer incidence data cover the year 2011. Since 2009, the BCR is authorized to link data from the BCR database with data on cancer-related diagnostic and therapeutic procedures and pharmaceuticals,<sup>65</sup> which are obtained from all seven Belgian health insurance companies (HIC) via the Intermutualistic Agency (IMA/AIM). Via this linkage procedure, the Cancer Registry receives for each registered patient, health insurance data starting from January 1 of the year preceding the incidence year, until December 31 of the third year after the incidence year (further mentioned as HIC data). For this project, HIC data were delivered to the BCR in April 2014.

#### Tumour Selection

The study population as selected from the BCR database included patients diagnosed with a specific cancer type diagnosed between 2004 and 2011.

Tumours were selected based on the International Classification of Disease-10<sup>th</sup> edition (ICD-10),<sup>66</sup> except for acute leukaemia for which the selection was based on a combination of topography and morphology codes according to the International Classification of Diseases for Oncology-3<sup>rd</sup> edition (ICD-O-3).<sup>67</sup>

In a concrete manner, the following inclusion criteria were applied:

- Female breast cancer (ICD-10: C50.0-C50.9)
- Prostate cancer (ICD-10: C61)

- Lung cancer (ICD-10: C34.0-C34.9)
- Rectal cancer (ICD-10: C20.0-C20.9)
- Malignant melanoma (ICD-10: C43.0-C43.9)
- Acute leukaemia (topography: C42.0-C42.9, morphology: 9840, 9861, 9867, 9870, 9872, 9873, 9874, 9891, 9910, 9930, 9866, 9871, 9896, 9897, 9895, 9984, 9931, 9920, 9987, 9728, 9836, 9729, 9837, 9727, 9835, invasive behaviour)
- Soft tissue sarcoma (ICD-10: C47.0-C47.9, C49.0-C49.9)

The following patients were excluded from the analyses:

- Patients without an official Belgian residence.
- Patients without a known identification number for social security (INSS).
- Patients who could not be linked to the health insurance data.

The aim of the project was to focus on the multidisciplinary team (MDT) meetings during which the management of patients with suspected/confirmed cancers was discussed. Besides MDT meetings for the initial diagnosis, follow-up MDT meetings and additional MDT meetings were also considered. In order to exclude MDT meetings that were potentially charged for other lesions in the same patient, the following additional exclusion criteria were applied for all analyses except for the volume analyses<sup>c</sup>:

- Patients with more than one invasive tumour (reported to the BCR, with incidences till the end of 2011) were excluded.
- Patients with benign lesions, lesions with uncertain or unknown behaviour or in situ lesions diagnosed between one year before the incidence date of the invasive tumour and the end of 2011 were excluded.

Detailed flowcharts including the selection criteria for each tumour type, as well as the number of excluded patients, were created (see appendix B).

<sup>c</sup> The methodology used for the volume analyses is described in detail in Section 3.2.2



### Selection of nomenclature codes

All nomenclature codes related to MDT meetings performed in the observation period were selected (see appendix B). Based on this list, all medical acts charged with one of these codes were retrieved from the IMA/AIM database for the patients included in the BCR selection.

MDT meetings were taken into account within a time frame of 3 months before the date of incidence till the end of the observation period, defined as December 31<sup>st</sup> of the 3<sup>rd</sup> year after the year of incidence, with a maximum of December 31<sup>st</sup> 2012. As an exception to this rule, analyses on the time interval between the incidence date and the date of first registered MDT meeting did not consider MDT meeting charged before the date of incidence.

Data cleaning based on patients for whom MDT meetings were charged more than 3 months before the date of incidence, led to the following additional decisions:

- For prostate cancer, MDT meetings were considered from 6 months before the date of incidence onwards, as suspect prostate cancer lesions are potentially followed by biochemical measures (PSA sampling) prior to taking a biopsy. Similarly, MDT meetings for lung cancer were considered from 9 months before the date of incidence onwards. Especially slow growing cancers such as neuro-endocrine tumours may be followed by imaging prior to the definitive diagnosis of malignancy.
- Patients for whom errors in either the date of incidence or date of MDT meeting were strongly suspected, were excluded from the analyses.

All analyses mentioning “any MDT meeting” were based on the 6 main codes for MDT meeting coordination (350372-350383; 350276-350280; 350291-350302). Codes referring to participation, additional fees and long consultation were not taken into account for these analyses. As an exception, additional fees for coordination of MDT meeting (350453-350464) were considered for “any MDT meeting” when no other MDT meeting coordination code was charged. Every MDT meeting code within the “any MDT meeting” group that took place at a different date was considered to represent a different MDT meeting. Detailed analyses on first, follow-up and additional MDT meetings were provided for incidence years 2010 and 2011. For these analyses, codes 350372-350383 were designated

as “first” MDT meeting, 350276-350280 as “follow-up” MDT meeting and 350291-350302 as “additional” MDT meeting. In the absence of any of these codes, additional fees for coordination of MDT meeting (350453-350464) were considered for “first” MDT meeting.

For the analyses on the number of attending physicians, the nomenclature codes describing MDT meeting coordination and MDT meeting attendance were considered (350372-350383; 350276-350280; 350291-350302; 350453-350464; 350416-350420; 350394-350405; 350475-350486). For each studied tumour type, the presence of the specialism which was assumed to be most involved in the treatment of the concerned tumour type, was included in a separate analysis. For each charged MDT meeting, the health insurance databases mention the competence code of the attesting physician. These codes were used to examine the presence of specific specialists or specialisms. The specialisms were classified into several categories, including surgery, internal or organ-specific medicine, radiotherapy, pathology, imaging or nuclear medicine, clinical biology or other. A detailed list of the categories and the corresponding competence codes is provided in appendix B. The analyses on the attending types of specialisms were performed for coordinators and participants together (350372-350383; 350276-350280; 350291-350302; 350453-350464; 350416-350420; 350394-350405; 350475-350486).

Analyses were presented by incidence year, year of MDT meeting, age group and stage, or a combination of these, as described within each table or figure. Unless otherwise specified, stage referred to the combined stage, being the pathological stage if available, and the clinical stage in the absence of pathological stage availability. As an exception to this rule, cases with clinical metastases (cM=1) were always considered as combined stage IV. For acute leukaemia and soft tissue sarcoma, no analyses by stage were provided as staging information was missing for acute leukaemia and frequently missing for soft tissue sarcoma. For malignant melanoma, no analyses by clinical stage were provided as the tumour category cannot be judged by clinical examination.



### 3.2.2 *Specific methodology for volume analyses*

#### 3.2.2.1 *Tumour selection*

For the analyses concerning the number of cases discussed by MDT meeting per centre, all patients with a newly diagnosed cancer in 2009 or 2010 and a discussion at a MDT meeting in the year 2010 were selected. No cases were excluded because of other invasive or non-invasive cancers.

#### 3.2.2.2 *Selection of nomenclature codes*

All analyses mentioning “any MDT meeting” were based on the 6 main codes for MDT meeting coordination (350372-350383; 350276-350280; 350291-350302). Codes referring to participation, additional fees and long consultation were not taken into account for these analyses. As an exception, additional fees for coordination of MDT meeting (350453-350464) were considered for “any MDT meeting” when no other MDT meeting coordination code was charged.

For the volume analyses, any MDT meeting charged within a period of 3 months before and 6 months after the date of incidence was taken into account. In line with the other analyses, MDT meetings until 6 months before the date of incidence for prostate and until 9 months before the date of incidence for lung were taken into account. In case more than one MDT meeting was charged within this period, the MDT meeting closest to the incidence date was kept for further analyses. Patients were assigned to the centre which charged this MDT meeting.

#### 3.2.2.3 *Availability of information on clinical or pathological stage by centre*

For each patient discussed at a MDT meeting in a specific centre, the information on the clinical stage or pathological stage of the concerned patient that was delivered to the BCR by that specific centre was examined. Only tumours that could be staged according to the 6<sup>th</sup> edition (incidence year 2009)<sup>68</sup> or 7<sup>th</sup> edition (incidence year 2010) of the TNM staging classification<sup>69</sup> were taken into account. For acute leukaemia and soft tissue sarcoma, no analyses on availability of clinical or pathological stage were provided as staging information was missing for acute leukaemia and frequently missing for soft tissue sarcoma. For malignant melanoma, no

analyses by clinical stage were provided as the tumour category cannot be judged by clinical examination.

To minimize influence of additional information coming from the pathology network, only information delivered by the clinical care program was considered. Due to switching fusions between centres, not all tumours discussed at a MDT meeting could be uniformly linked to a corresponding centre in the database of the BCR. Concretely, in case a centre defused into several smaller centres during the year 2010, patients for whom a MDT meeting was charged before this demerger could not be assigned to one of the smaller centres created after demerger.

The analyses describing the availability of staging information by centre for patients discussed at a MDT meeting only included patients for whom the clinical care program of the centre that charged the MDT meeting could be identified in the BCR data as a data source. In addition, the included tumours needed to be “stageable”(i.e. no “not applicable (NA)” cases).

### 3.3 *Data limitations*

Working with administrative databases yields to some limitations in interpretation of the results. The following limitations were encountered in this project:

- IMA database contains only the reimbursed data which implies that only registered and reimbursed MDT meetings are considered for analyses. Before 2010, only 1 MDT meeting per calendar year was allowed which implies that other possible MDT meetings were not registered at RIZIV/INAMI level.
- Legal financial rules of RIZIV/INAMI allow only 4 (before 11/2010) to 5 (after 11/2010) specialists to be mentioned on the RIZIV/INAMI's form for MDT meeting (+ eventually an additional external specialist). This implies that other participants are not included in the analyses even if present at the consultation.
- There is no rule on how hospitals should organize the MDT meetings. They are free to plan a MDT meeting by cancer type or to discuss all cancer patients in one MDT meeting whatever the cancer type. This might influence the results on the presence of some specialists in the MDT meeting and on the timing of the MDT meeting.



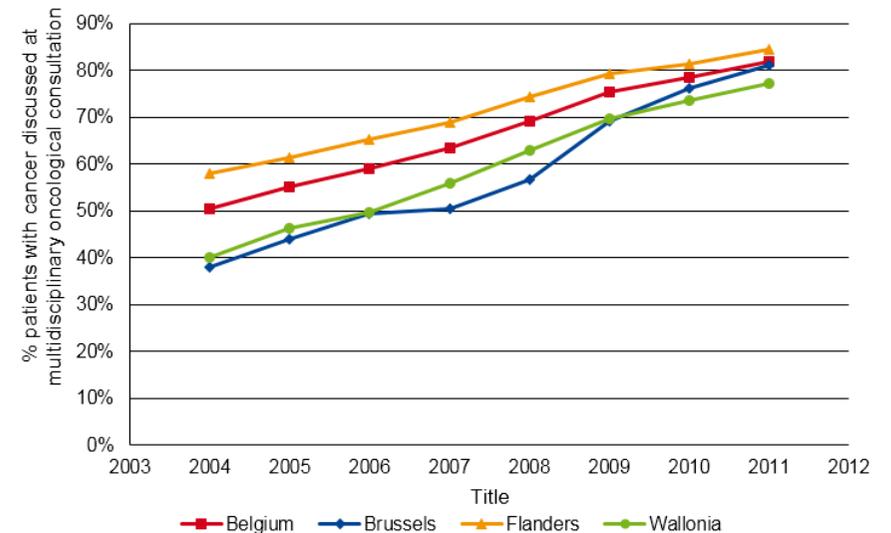
- The length of the observational period is 3 years after incidence date except for cancers diagnosed in 2010 and 2011 for which it is respectively 2 and 1 years. This might have an impact on the results for the last 2 years.
- Selection of data: as mentioned in the methodology section, only patients with one invasive tumour were selected. Therefore, results do not include all patients with cancer.

### 3.4 Results

#### 3.4.1 General results over all cancers

Overall, the percentage of patients diagnosed with cancer (with or without multiple lesions) and discussed during a MDT meeting within a timeframe of 1 month before and 6 months after the incidence date increases for each region between 2004 and 2011 to reach, at the country level, a coverage of 82% of patients with a cancer diagnosed in 2011 (81% in Brussels, 85% in Flanders and 77% in Wallonia).

**Figure 3 – Percentage of patients diagnosed with an invasive cancer and discussed at a MDT meeting by year of incidence**



Source: Belgian Cancer Registry data linked to data of the Intermutualistic Agency

#### 3.4.2 Percentage of MDT meetings performed per cancer

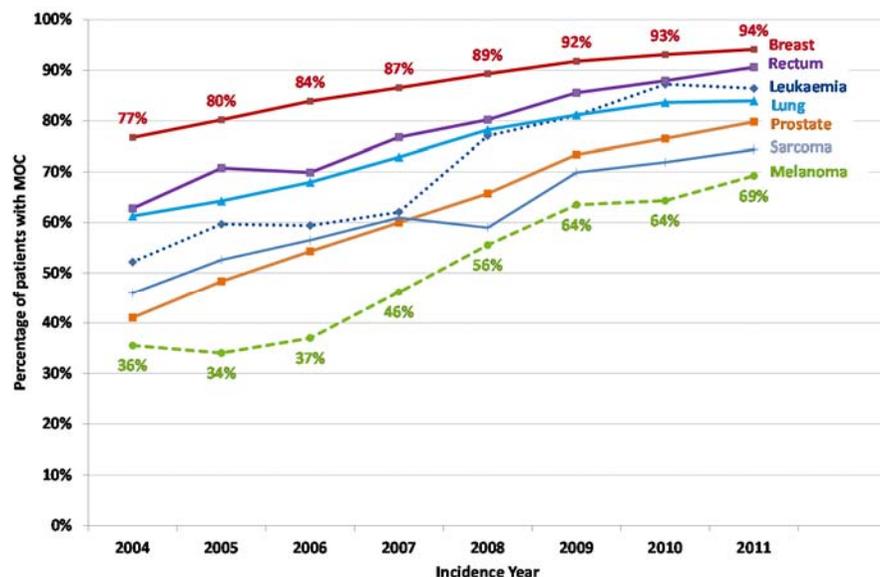
The number of patients diagnosed with one invasive tumour and no other lesions increases slightly between 2004 and 2011 but varies across selected cancer types: between 6 000 and 9 000 patients per year for breast, prostate and lung cancer, around 2 000 patients per year for rectal cancer and malignant melanoma, and finally, below 500 patients per year for acute leukaemia and soft tissue sarcoma (see appendix B).

The percentage of patients with one invasive tumour and discussed at least in one MDT meeting within the timeframe of 3 months before and 3 years after diagnosis (for more details on the patient selection and used time frames, see methodological section) increased over the years for all cancers selected (see Figure 4). Overall, for all cancers diagnosed during 2011, the coverage rate of cancers by a MDT meeting is above 70% except for malignant melanoma (69%). Even for cancers which were less systematically discussed at a MDT meeting in 2004, the observed increases



in coverage between 2004 and 2011 were noticeable (for rectum (28%), soft tissue sarcoma (28%), malignant melanoma (34%) and prostate (39%).

**Figure 4 – Percentage of patients diagnosed with one invasive tumour and discussed during a MDT meeting within the 3-month before and 3-year after diagnosis**



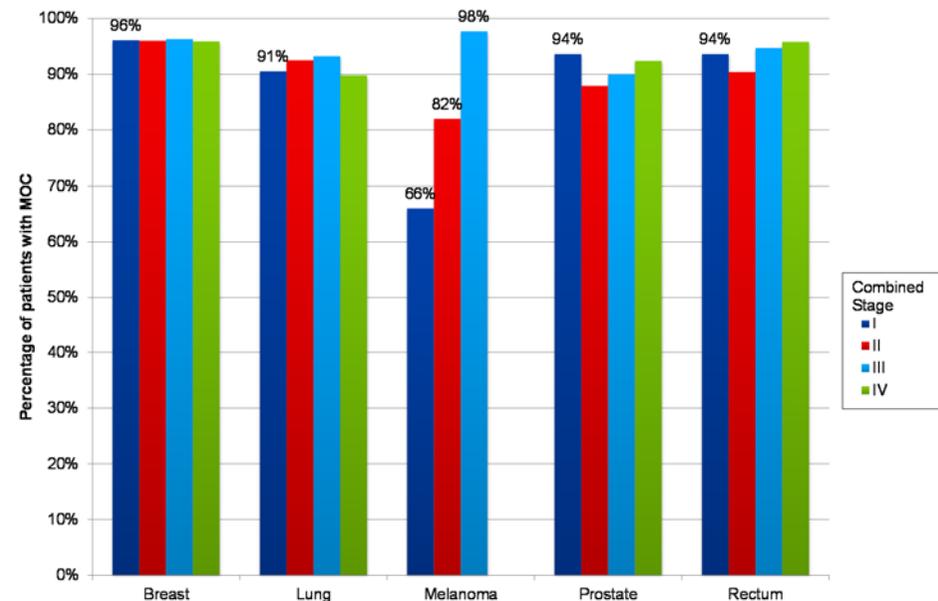
Source: BCR-IMA data

For all cancer types, the increase over time in coverage by MDT meeting was observed in each of the combined stages (see appendix B). Moreover, existing differences between combined stages observed in 2004 tend to disappear in 2011 reaching for each cancer type and each “stageable” combined stage (combined stage I to IV), a coverage rate of approximately 90% (except for malignant melanoma). For malignant melanoma, this percentage increased with the stage: 66% for patients with combined stage I to 98% for combined stage III patients – see Figure 5. The low percentage of MDT meeting coverage for patients with malignant melanoma with low

stage might be due to the fact that patients with small melanomas are not referred automatically to a hospital and do not enter the oncological care program. However, patients with malignant melanoma at higher stages are more frequently discussed during a MDT meeting. Overall, for any cancer type, the patients with higher combined stage are likely to be discussed during MDT meeting (around or more than 90% for combined stage IV).

Figure 6 illustrates that the coverage rate decreased with the age of the patient.

**Figure 5 – Percentage of patients discussed in a MDT meeting per combined Stage - Incidence year 2011**

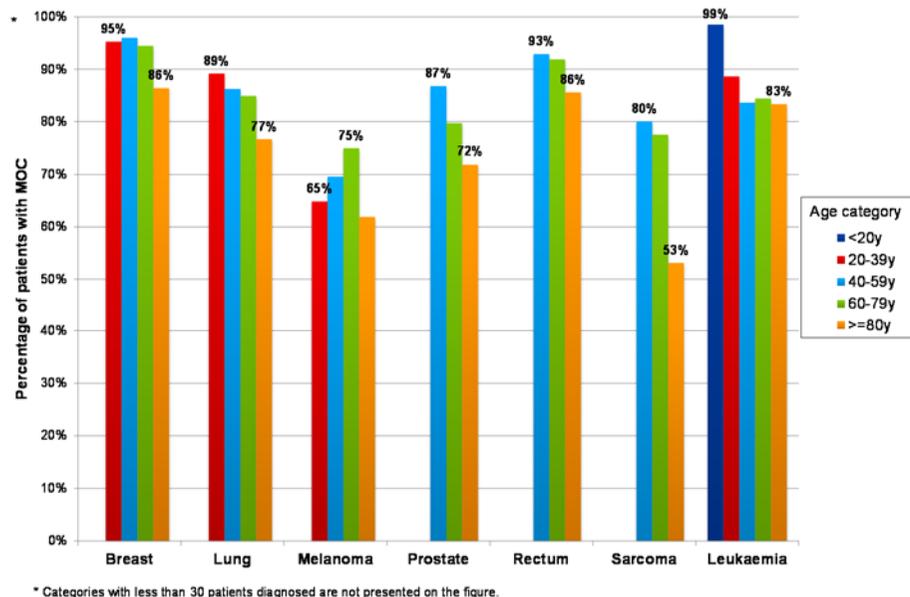


\* Categories with less than 30 patients diagnosed are not presented on the figure.

Source: BCR-IMA data



**Figure 6 – Percentage of patients discussed in a MDT meeting per age category - Incidence year 2011**



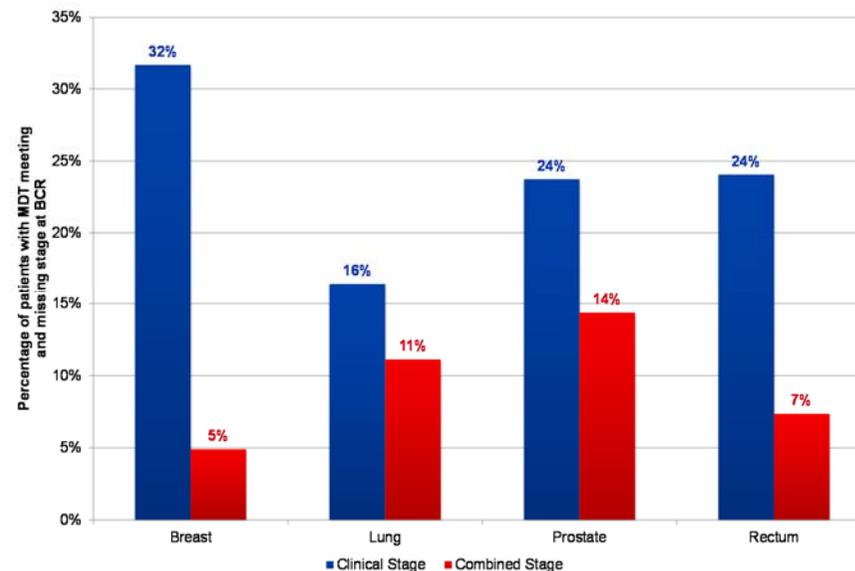
\* Categories with less than 30 patients diagnosed are not presented on the figure.

Source: BCR-IMA data

### 3.4.3 Missing cancer stage for patients discussed during a MDT meeting

Surprisingly, we observed (Figure 7) that for almost all selected and stageable cancer types (i.e. excluding acute leukaemia, malignant melanoma and sarcoma), the clinical stage was missing in about 25% of the cases (in 32% of the cases for breast cancer). As the pathological stage could also be provided to the BCR by the pathology network outside of MDT meeting, the availability of the combined stage was higher in the BCR data than the clinical stage.

**Figure 7 – Percentage of patients having been discussed at a MDT meeting with missing stage (clinical and/or combined) – Incidence year 2011**



Source: BCR-IMA data

### 3.4.4 Timing and number of MDT meetings

As shown in Table 5, for acute leukaemia and lung cancer, the MDT meeting was performed within 2 to 3 weeks after the incidence date for 50% of the patients (within 5 weeks for 75% of the patients), whereas for breast cancer, rectum and soft tissue sarcoma this delay was within 4 weeks after incidence for 50% patients (within 6 to 9 weeks for 75% patients). For malignant melanoma and prostate cancer, the first MDT meeting was performed within 6 weeks for 50% of patients and within 12 weeks after incidence for 75% of patients. For patients with malignant melanoma, this longer period might be due to the referral period of patients with melanoma initially treated by the private dermatologist to the hospital.

**Table 5 – Time to first MDT meeting after incidence date (in weeks)**

	N	25th Pctl	50th Pctl	75th Pctl
Acute leukaemia	2 606	1	2	5
Lung	34 077	1	2	5
Breast	57 479	2	4	6
Rectum	11 529	2	4	7
Soft tissue sarcoma	1 210	2	4	9
Malignant melanoma	5 886	4	6	12
Prostate	36 624	3	6	12

Source: BCR-IMA data

For none of the selected tumour types, large differences were noted in the time to first MDT meeting between the different stages (presented by separate analyses: see methodology and results displayed in appendix B).

For the majority of patients discussed during a MDT meeting, there was only 1 MDT meeting registered and linked to the cancer, but the number of MDT meetings performed per patient increased with the combined stage of the disease. In 2011, 20% of patients with combined stage I breast cancer were discussed during more than one MDT meeting compared to 35% of patients with combined stage IV. This phenomenon was observed for all cancers with the exception of lung cancer where the number of MDT meetings per patient was higher in combined stages II and III (more than 30%) than for combined stages I and IV (around 20%) - see appendix B.

The number of MDT meetings per patient tended to increase over time for all cancer types except for prostate cancer (stable over incidence year) and

malignant melanoma (decrease of the percentage of patients with more than one MDT meeting from 30% in 2004 to 20% in 2009- see appendix B).

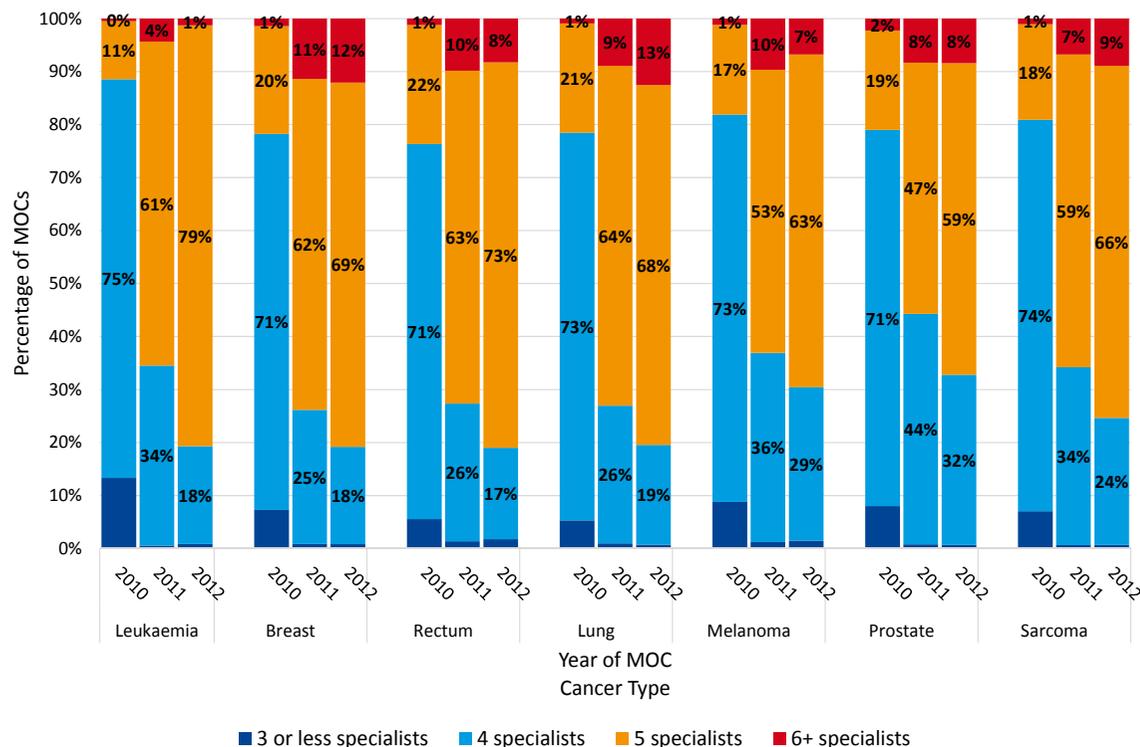
The time between the first and second MDT meeting was strongly influenced by the financial rule stipulating that a MDT meeting is reimbursed maximally once per calendar year. This rule changed on 1/11/2010 but we could not see the impact yet in the administrative data available for this report given that we only have 1 year follow-up data for patients with cancer incidence in 2011. Before 2011, the delay between first and second MDT meeting was around 12 months for half of the cancer patients (for any of the 7 types of cancer considered in this report).

#### 3.4.5 MDT meeting participants: Specialists

Parallel to the other analyses, the composition of the MDT meeting was analysed through the administrative data, limiting the analyses to registered and reimbursed data. Before 2010, a maximum of 4 specialists (including the coordinator) could be recorded in the database for reimbursement purposes according to the AR/KB (date: 27 September 2010; publication date: 24 October 2010). An additional external specialist could also attend the MDT meeting when needed, and be registered as such in the database. After 2010, this rule was extended to a maximum of 5 specialists (including the coordinator, with an optional external specialist in addition). There is no way to estimate the actual number of specialists present at the MDT meeting except through the web survey (see Chapter V). As shown in Figure 8, the composition of the MDT meetings (based on register only) followed the legal rules. The majority of the MDT meetings were composed of 4 specialists (including coordinator) until 2010 (more than 70% of the time) and we clearly see the change in 2011, with 5 specialists registered in around 60% of the cases for all cancer types except for malignant melanoma (53%) and prostate cancer (47%). In 2012, around 70% of MDT meetings were composed of 5 specialists (except malignant melanoma 63% and prostate cancer 59%).



Figure 8 – Percentage of MDT meetings by number of specialists registered – Year of MDT meeting 2010 to 2012



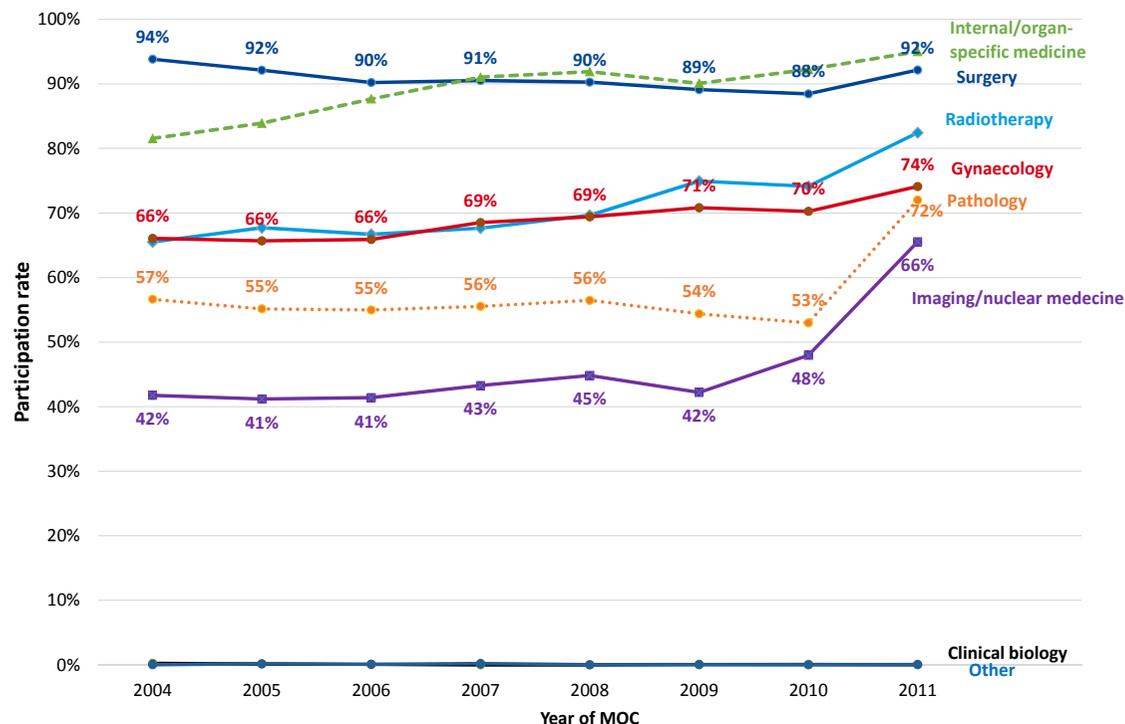
Source: BCR-IMA data

For female breast cancer, surgeons were registered and reimbursed for attending a MDT meeting in around 9 out of 10 MDT meetings (Figure 9). The participation rate of the internists/organ-specific specialists was also quite high (around 80 to 90% of the MDT meetings). However, there was a clear increase from 2010 onwards in the participation rate for radiologists,

pathologists and specialists in imaging/nuclear medicine. For breast cancer, the gynaecologists (included in the surgeon category) were registered in 74% of the MDT meetings in 2011. The participation rates for the other cancer types are displayed in appendix B.



Figure 9 – Participation rate per specialism – Breast Cancer



Source: BCR-IMA data

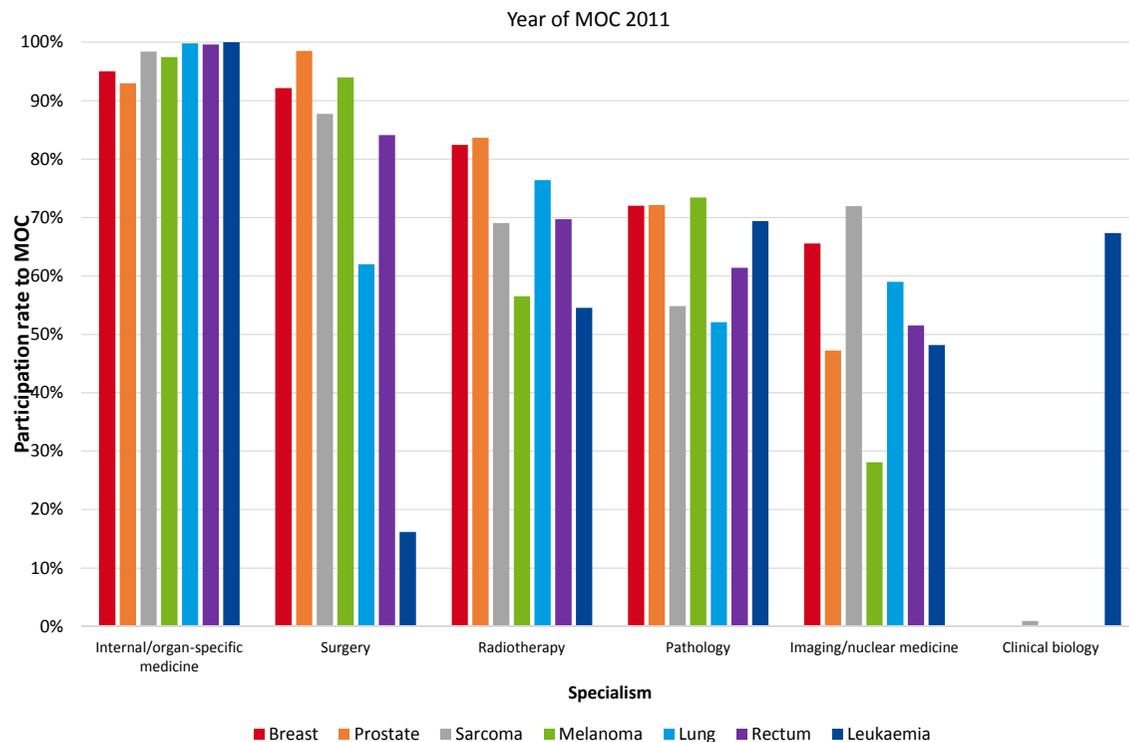
A summary for all cancers having a MDT meeting in 2011 is displayed in Figure 10. The participation rate of internists/organ-specific specialists was above 90% for all cancers, followed by the surgeons (more than 80% of the time) for all cancers except for acute leukaemia and lung cancer. The participation rate of specialists in imaging, pathology and radiotherapy was more variable amongst the different cancer types. And as expected, specialists in clinical biology were mainly present at MDT meetings concerning acute leukaemia patients.

Competence codes for some specialists (in gastroenterology and clinical haematology) have been introduced or modified. Therefore, the increase in the participation rate for those specific specialisms might be induced by introduction of those new “specific” codes. For example, there was a AR/KB (18.12.2009, publication date 28.01.2010) introducing new nomenclature codes for consultations with a specialist in clinical haematology. From 2010 onwards, a new competence code for specialists in clinical haematology was introduced in the INAMI/RIZIV database. Those specialists were included in



the group of internists without distinction. For specialists in gastroenterology, new competence codes were introduced in 2007.

Figure 10 – Participation rate– All cancers (Year of MDT meeting 2011)



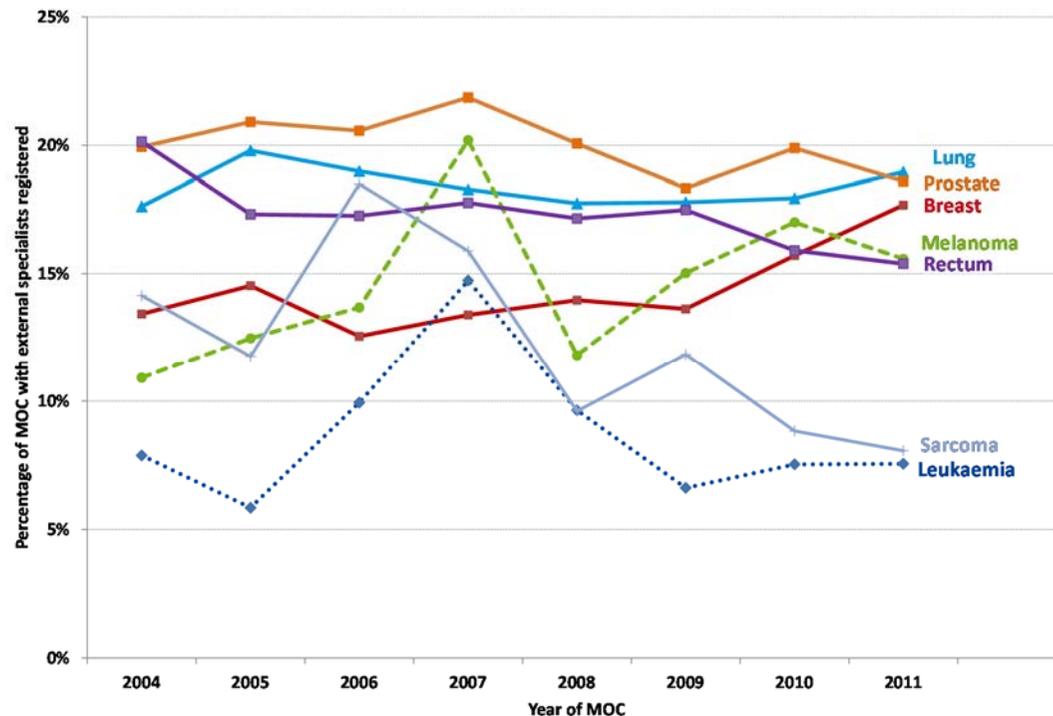
Source: BCR-IMA data

When needed “external” specialists can attend a MDT meeting; this is registered in the RIZIV/INAMI’s reimbursement form. In 2011, external expertise was requested more often for lung cancer (19%), prostate and

breast (18%) cancer than for malignant melanoma (16%), rectal cancer (15%) and finally acute leukaemia and soft tissue sarcoma (8%) (Figure 11).



Figure 11 – Percentage of MDT meetings with registered external specialist – MDT meeting year 2004-2011



Source: BCR-IMA data

### 3.4.6 MDT meeting participants: General Practitioners

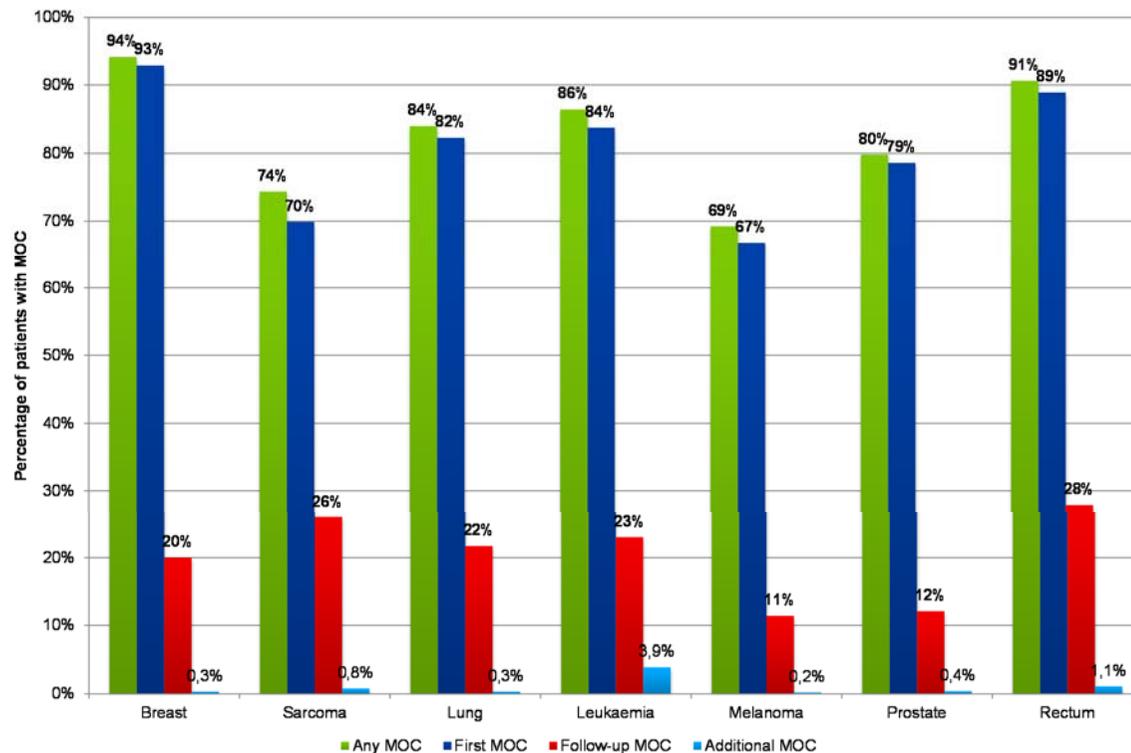
The participation of the general practitioner (GP) at the MDT meeting (as registered in the RIZIV/INAMI's form) was very low for all cancers (around 3% in breast, prostate, soft tissue sarcoma, melanoma to around 4% in lung and rectal cancer and 0% in acute leukaemia)(see appendix B). Again, as these analyses are based on administrative data, they do not necessarily reflect the true presence of GPs at MDT meetings. The GP participation is discussed in more details in Chapter VI, in which the results of the GPs' interviews are presented.

### 3.4.7 MDT meeting types

From the end of 2010 onwards, changes in nomenclature codes were made in order to differentiate the first MDT meeting from the follow-up and additional MDT meetings. Figure 12 illustrates that for around 20% of patients diagnosed in 2011, a follow-up MDT meeting was performed and in less than 1% of the cases (except for acute leukaemia 4%) an additional MDT meeting was done.



Figure 12 – Percentage of patients discussed in a MDT meeting by MDT meeting type - Incidence year 2011





### 3.4.8 *Variability per centre and volume of patients discussed at a MDT meeting*

In this section, the analyses were performed on patients with a specific invasive tumour, regardless of other invasive or non-invasive lesions (as explained in methodology section 3.2.2). Only patients for which a MDT meeting was charged were taken into account.

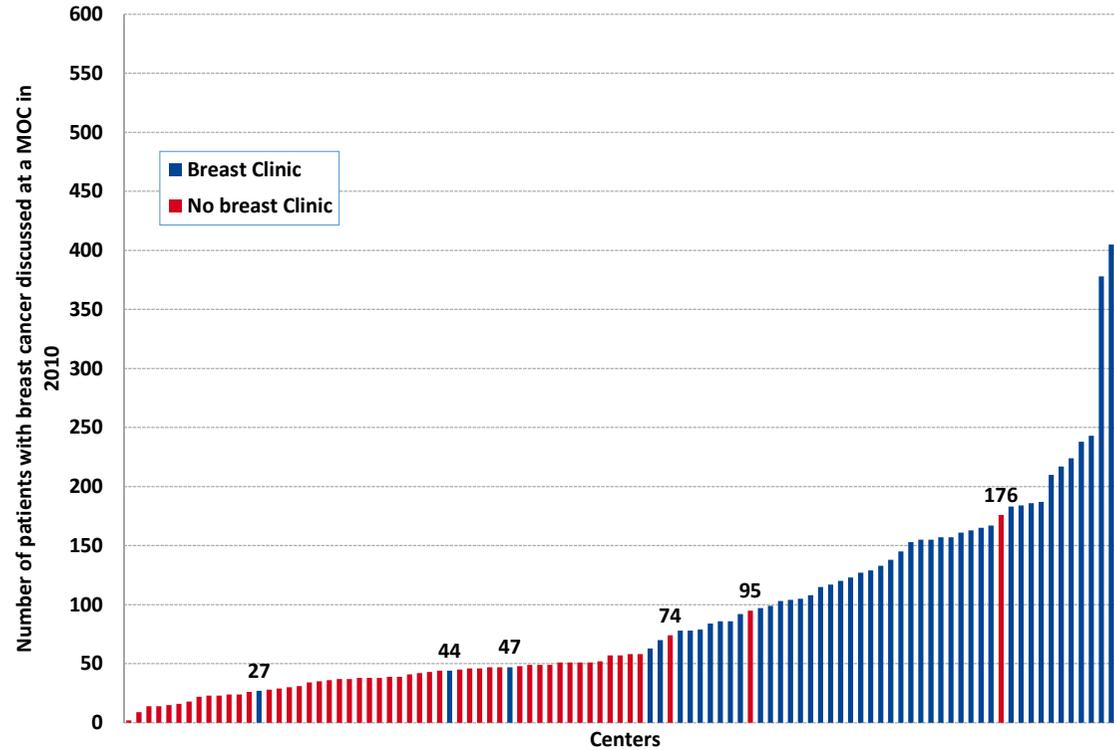
#### **Breast cancer**

In 2007, the Belgian legislation on the recognition of breast clinics was published (AR/KB 26<sup>th</sup> April 2007), specifying the many quantitative norms that a hospital has to meet in order to be recognized as a breast clinic. A transition period was foreseen so that hospitals could reorganize their services: during the first two years, a minimal volume of 100 newly diagnosed patients per year was required. After the end of the transition period, the volume norm increased up to 150 patients per year (i.e. the EU recommendation). At the end of 2013 (AR/KB 23 December 2013), the recognition norms were modified again, and introduced the concept of a “breast clinic with a role of coordination” (for which a minimal volume of 125 patients per year applies) and the concept of “satellite breast clinic” (which has an agreement with the coordination breast clinic, and for which a minimal volume of 60 patients per year applies).

Figure 13 illustrates the situation in 2010, thus during the transition period. It shows a very large dispersion in the volume of breast cancer discussed at MDT meetings, with approximately half of the hospitals with a volume around (or lower than 50 cases per year), and with some strange cases of breast clinics with very low volumes.



Figure 13 – Number of patients discussed during a MDT meeting – Invasive breast cancer (Incidence year 2009 – 2010 and MDT meeting year 2010)

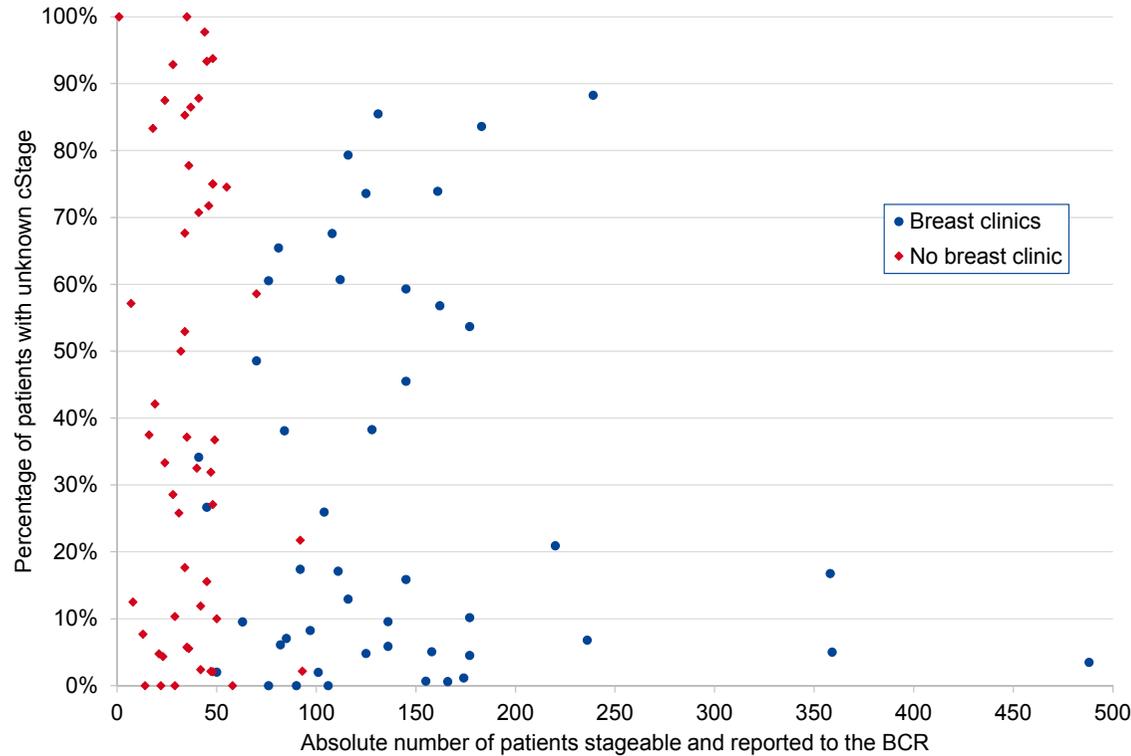


Source: BCR-IMA data

As shown in Figure 14 for breast cancer, the percentage of clinical stage (cstage) not reported to the BCR by the oncological care programs of the centres charging a MDT meeting was quite high for a lot of sites; in addition, there was a high inter-centre variability.



Figure 14 – Percentage of clinical stage not reported to Belgian Cancer Registry – Invasive breast cancer



Source: BCR-IMA data

**Summary for all cancers**

Table 6 shows the centre distribution of the number of patients discussed during a MDT meeting and registered in the BCR database. There was a large dispersion of care for patients with soft tissue sarcoma or acute leukaemia: many centres discussed only a few number of patients at MDT

meeting a year. For soft tissue sarcoma, 75% of centres reported a maximum of 4 cases discussed at MDT meetings whereas for acute leukaemia, this number was set at 9 patients.<sup>d</sup>

<sup>d</sup> Recommendations for the management of rare cancers were discussed in KCE report 219.



There is also a high variability between centres with regard to the percentage of patients discussed in a MDT meeting for whom the clinical stage was missing/unknown (Table 7). Half of the centres did not report the clinical stage to the BCR for about 30% or even more of their breast cancer

patients. (Figures by cancer types with the number of stageable tumours and the proportion of unreported clinical stage per centre are displayed in appendix B).

**Table 6 – Number of patients discussed during a MDT meeting and reported to BCR**

	Breast	Leukaemia	Lung	Melanoma	Prostate	Rectum	Sarcoma
<b>N (centres)</b>	100	65	102	85	99	100	68
<b>Median</b>	58	3	50	8	49	17	2
<b>Q1-Q3</b>	38 - 130	1 - 9	27 - 90	4 - 18	28 - 79	10 - 29	1 - 4
<b>Min-max</b>	2 - 531	1 - 52	2 - 217	1 - 127	1 - 269	3 - 97	1 - 19

**Table 7 – Percentage of missing clinical stage per centre – stageable patients discussed during a MDT meeting (excluding NA stage)**

	Breast	Leukaemia	Lung	Melanoma	Prostate	Rectum	Sarcoma
<b>N (centres)*</b>	99	NA	99	NA	96	97	NA
<b>Median</b>	27%		11%		19%	21%	
<b>Q1-Q3</b>	6% - 67%		4% - 21%		5% - 41%	7% - 37%	
<b>Min-max</b>	0% - 100%		0% - 97%		0% - 100%	0% - 83%	

\*Centres with stageable patients discussed at a MDT meeting (excluding NA stage)



### 3.5 Conclusion – Discussion

From 2004 onwards, there was a continuous increase in the coverage rate of the cancers by a multidisciplinary oncological consultation, for all 7 cancers under study. Differences between cancer types remained, yet they decreased over time: in 2011 more than 9 out of 10 breast cancer patients were discussed during a MDT meeting, compared to only 7 out of 10 malignant melanoma cases. The low percentage of MDT meeting coverage for patients with malignant melanoma at low stage might be due to the fact that patients with small melanomas are not referred automatically to a hospital and do not enter the oncological care program. However, patients with a higher stage (for any of the cancer types) are generally well discussed during MDT meetings (around or more than 90% of the cases for stage IV). The reasons for the low percentage of MDT meeting coverage in patients with soft tissue sarcoma might be explained, according to the experts, by the fact that soft tissue sarcomas are less frequent than other cancer types included in this project and therefore it takes probably more time to have enough cases to set up a MDT meeting. Nonetheless, despite the high financial incentives the target set in the cancer plan (i.e. most cancer patients being discussed during a MDT meeting) is not yet achieved.

The way the MDT meeting is organised (i.e. either through a general MDT meeting or through cancer-specific MDT meetings) could not be derived from the administrative data. This aspect is further elaborated in Chapter 5. Another limitation of the data is that they are limited to what has been registered and charged. Therefore, for example, the number of specialists present at the MDT meeting as reported in this chapter was limited to the legal maximum number of specialists for whom reimbursement can be requested. Nevertheless, the data showed that MDT meetings were performed within a short period after incidence date (within 1 to 2 months depending on the cancer) regardless of the stage of the disease (except for malignant melanoma) and include in most of the cases, at least the maximum number of specialists that might be registered on the reimbursement form. The MDT meetings included most of the time the

internists/organ specific specialists, surgeons, pathologists, radiologists and other imaging specialists. The increase of the participation rate of pathologists, radiologists and imaging specialists from 2011 onwards undoubtedly followed the change in legal rules allowing to add one specialist on the reimbursement form. They joined probably the MDT meetings before 2011 but were not automatically registered on the form due to the limitation of specialists to 4 (including the coordinator).

Participation rate of GPs (reported on the RIZIV/INAMI's form) was very low for all cancer types considered in this report. These results should be put in perspective with the web survey results described in Chapter 5.

In view of the fact that MDT meetings are highly recommended for all breast cancer patients and that breast clinics have to reach minimum volume criteria (i.e. initially 100 new cases per year and nowadays 150), it was surprising that some breast cancer clinics reported less than 100 new cases per year being discussed in a MDT meeting. In addition, there is evidence of very low levels of activity for the centres which do not have the recognition of breast clinic, as physicians working in those hospitals are still allowed to treat breast cancer patients.

For all cancers under study the volume of patients treated by centre is highly variable and for some specific cancers, like soft tissue sarcoma and acute leukaemia, there is even a larger dispersion of care.<sup>e</sup>

Cancer stage reporting is one of the legal obligations of the responsible physician of the MDT meeting in order to keep the accreditation as oncological care program. Despite this legal requirement, the reporting of clinical stage to the BCR is not yet optimal; there is also a high variability between centres. To improve stage reporting, linking the reimbursement of the MDT meeting discussion and the financing of data managers to the registration of the cancer stage could be a targeted intervention.

---

<sup>e</sup> Management of rare cancer patients in Reference Centres is discussed and recommended in recent reports, including KCE reports 219 (rare cancers) and 229 (hospital financing).



### 3.6 Key Messages

- Since 2004, there is a clear increase in the proportion of cancer patients discussed in MDT meetings. 82% of the cases diagnosed in 2011 were discussed during a MDT meeting within a timeframe of 1 month before and 6 months after the incidence date.
  - However, for some specific cancer types (e.g. malignant melanoma, soft tissue sarcoma, prostate) there is still some “underuse” of the MDT meeting. Specificity of the cancer type plays an important role in the need for a MDT meeting (e.g. small melanoma might not request to have a MDT meeting in contrast to higher stages).
  - There is room for improvement with regard to the report of the clinical stage of patients discussed during a MDT meeting: the clinical stage was missing for 32% of female breast cancer cases and for 20% to 25% of other (stageable) cancers under study.
  - For most cancer types, the first MDT meeting was held within a month after cancer incidence date, yet there are differences between cancer types (2 or 3 weeks in 50% of patients with acute leukaemia and lung cancer, within 4 weeks for breast cancer, rectal cancer and soft tissue sarcoma; and within 6 weeks for patients with prostate cancer and acute leukaemia). When the stage of the disease was considered, the variability in time to the first MDT meeting was small for all cancer types under study.
- Since the creation of the MDT meeting in 2002, there were several legal changes that had an impact on the reimbursement and financing rules of the hospital. The administrative data showed clearly the impact of the 2010 rule that extended the maximum number of specialists registered and reimbursed (including the coordinator) from 4 to 5. Before 2010, nearly 70% of the MDT meeting reports registered 4 specialists whereas in 2012 70% registered 5 specialists. The additional registrations related above all to specialists in imaging (radiologists) and pathologists. Yet, due to the legal limitation of the number of MDT meeting participants that are reimbursed (and hence registered in the administrative database), the actual number of MDT meeting participants cannot be derived from administrative data.
  - Due to the same limitation, the actual GP participation in the MDT meetings cannot be evaluated in a reliable way based on administrative data. Approximative estimates however show very low presence rate of GPs at MDT meetings.
  - It was apparent that some breast cancer clinics reported less than 100 new cases a year being discussed during a MDT meeting while there is a volume norm (initially set at 100 and then increased to 150) and while there is consensus that MDT meeting discussions are valuable in all breast cancers.
  - For all cancer types under study dispersion of care was observed, based on the volume of patients discussed during a MDT meeting per centre.



## 4 WHAT DO BILLING DATA TELL US ABOUT MDT MEETINGS IN BELGIUM?

### 4.1 Introduction

In this chapter we analyse the billing data as such, with no reference to other data sources.

The first section refers to the accounting process. It was found, by chance, during the analyses that some services were entered into the sickness fund accounts a very long time after they were provided. Although this is purely an administrative point, it was decided to study this unusual phenomenon in more detail, given its consequences for the data analysis in general.

These billing data do not in themselves contain a great deal of medical information, the nomenclature codes relating to MDT meetings are not very specific. Nevertheless, they have the advantage of being reliable, given the checking procedures used by the sickness funds, and relatively recent whilst it would take time to link them to other data sources to enrich them. In the second and third sections we will attempt to generate information with statistical tools which can be of use in assessing whether these services are being properly used. In part two, we evaluate differences in the number of MDT meetings between hospitals, and in part 3 we examine the qualification of the medical doctors, and how these vary between hospitals.

### 4.2 Methods

#### 4.2.1 Time taken to book the MDT meetings

The analysis is based on the so-called 'P documents' of the National Institute for Health and Disability Insurance (NIHDI, RIZIV-INAMI). These billing data are recurrently/periodically transmitted to the national institute by the sickness funds. Data were used of the accounting period 01/01/2011 to 30/06/2013. The identity of the hospital is registered in the zone 'place of service' in case of an intramural service, which is the case for MDT meetings. When this zone did not contain usable information, which was rarely the case, the identity of the hospital was detected by other parameters.

For every hospital we subsequently calculated the number of 'primary' MDT meetings (nomenclature codes 350372/-383, coordination fees for the first MDT meeting) carried out during 2011. We then checked how many of these services were recorded by the sickness funds during 2011. This number is expressed as a percentage of the number of these fees provided in 2011. If the percentage is found to be, for example, 90%, this means that 90% of the MDT meetings carried out in 2011 were recorded by the sickness funds in 2011, with 10% being recorded in 2012 or even, possibly, 2013.

We carried out the same calculation for all medical services (articles 1-26 and 32-34 of the nomenclature) to give us a reference frame.

#### 4.2.2 Benchmarking of MDT meeting activities

As before we calculated for every hospital the number of primary MDT meetings carried out in 2011. Taking into account the slow booking process for some hospitals these are the most recent complete data available. Given the differences in size between hospitals, we weighted this figure using a parameter which reflects as accurately as possible the oncological activity in each hospital, and which is easily available from NIHDI (RIZIV-INAMI) data. We chose to use for this purpose the number of one-day chemotherapy patients during the same period. This figure is available in the so-called 'ADH documents', namely the 'maxiforfait' 761353/761095. These 'ADH documents' are, as the P documents, supplied by the sickness funds. This lump sum is reimbursed for nursing care in case of an intravascular, intracavitary or intravesical administration of a product of ATC class L01, V03AF or L03AX03 (chemotherapeutic agents). This parameter does not cover all cancer patients, and excludes, for example, those who undergo an operation or radiotherapy without chemotherapy. Nevertheless, this proxy has the advantage of being accurate and immediately available in the data.



### 4.2.3 *Studying the qualification of MDT meeting medical specialists*

The P documents provide information, using a 'qualification code', on the discipline of the medical specialist charging for MDT meeting services. An analysis of these qualifications and comparisons between hospitals can give an insight into how MDT meetings are organised and to what extent particular disciplines are represented.

The analysis is divided into four parts:

- analysis of the coordinator' speciality (codes 350372, 350383, 350276, 350280, 350291);
- analysis of the participant' qualification (code 350394, 350405, 350416, 350420);
- analysis of the qualification of the MDT meeting coordinator or participant in general;
- analysis of the qualification of the physician providing information to the patient after the MDT meeting (code 350232, 350254, 350265).

Once again, the analysis is based on services provided in 2011 for an accounting period up to 30/06/2013. In the case of additional qualifications which are not directly relevant to the assessment of MDT meeting-services (for example an urologist with a further health professional qualification in emergency healthcare), we group the qualification codes together according to the basic speciality (in this case urology).

The analysis was performed at national level and hospital level; in some cases the analysis was performed by type of hospital (general/university). Hospitals with an atypical profile were analysed in detail.

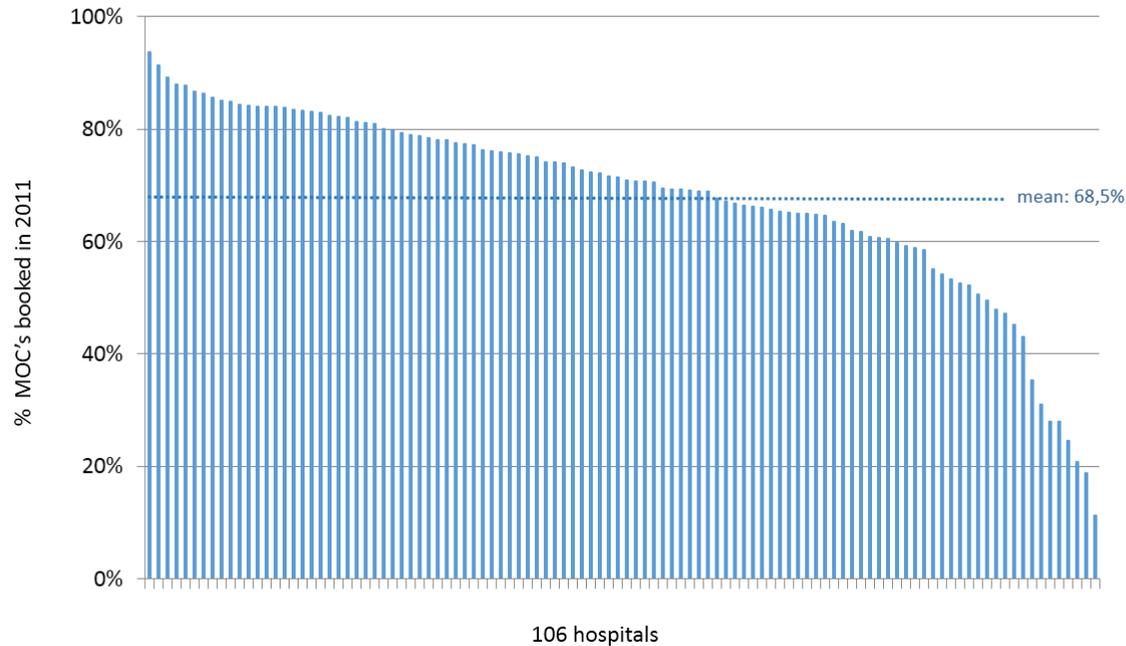
## 4.3 Results

### 4.3.1 *Time taken to book the MDT meetings*

Figure 15 shows, per hospital, the percentage of primary MDT meetings carried out in 2011 and entered in the sickness funds accounts in the same year. A high value means that the services have been quickly invoiced and recorded by the hospitals and sickness funds; a low value implies the opposite. The national average is 68.5%, which is lower than the general percentage for medical fees (see data in appendix C). This means that the invoicing process for MDT meetings is slower than the general invoicing process. Some hospitals have a very low value, such as 20%, which means that most of the MDT meetings carried out in 2011 were only recorded in the sickness funds books the following year, or even later.



Figure 15 – Primary MDT meetings realized in 2011: percentage booked in the same year – analysis per hospital



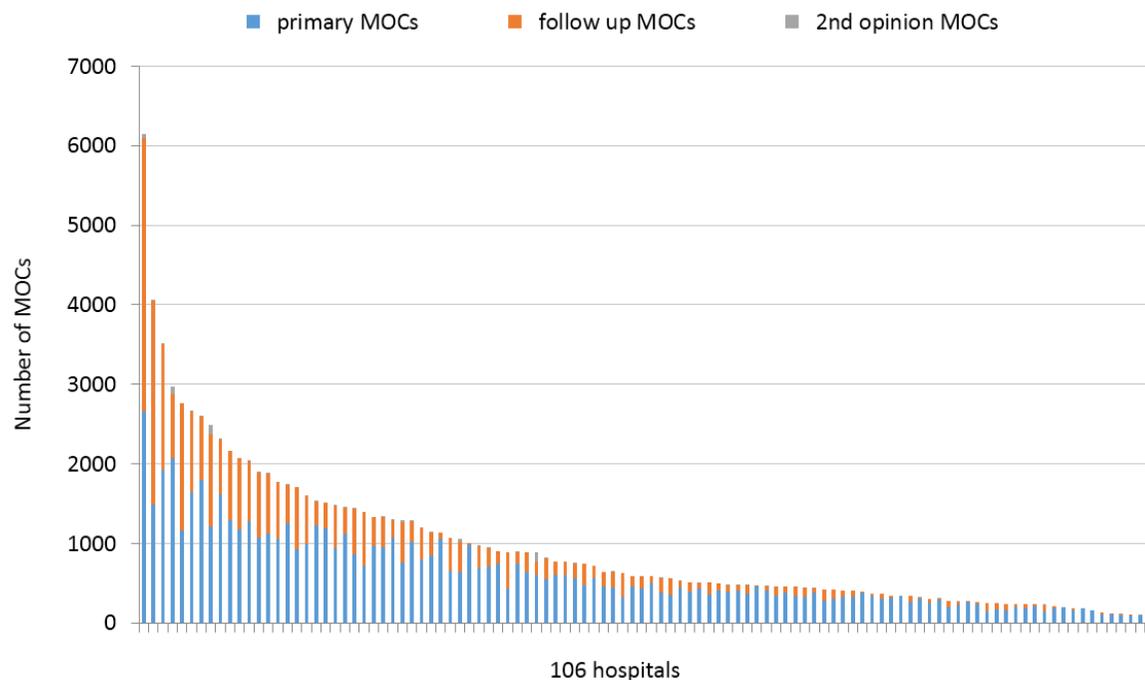
Note: code 350372-383, coordinator honorarium – 100% = rapid booking, all MDT meetings realized in 2011 are also booked in 2011  
Data source: RIZIV-INAMI doc P – booking period 01/2011 – 06/2013

#### 4.3.2 Benchmarking of MDT meeting activities

Figure 16 presents the number of primary MDT meetings carried out per hospital in 2011, in descending order; together with follow-up MDT meetings and second opinion MDT meetings. It shows large inter-hospital variation in follow-up MDT meetings, with large numbers in some hospitals, sometimes exceeding the number of primary MDT meetings. Second opinion MDT meetings are rare and occur particularly in large hospitals.



Figure 16 – Number of MDT meetings per acute hospital (primary, follow-up, second opinion) realised in 2011



### 4.3.3 Studying the qualification of MDT meeting medical specialists

#### 4.3.3.1 Qualification of coordinators

In this section we map the specialties of coordinators, firstly by type of hospital (general/university), and then by individual hospital.

Figure 17 shows the number of coordination fees, divided according to the specialty of the physician. There were 100 144 coordination acts in 2011; specialties with less than 300 coordination acts were excluded from the results. We carried out three analyses, looking at hospitals in general, then the subgroup of 'general hospitals', and finally the subgroup of 'university

hospitals'. We added relative frequency, based on the total number of coordination fees.

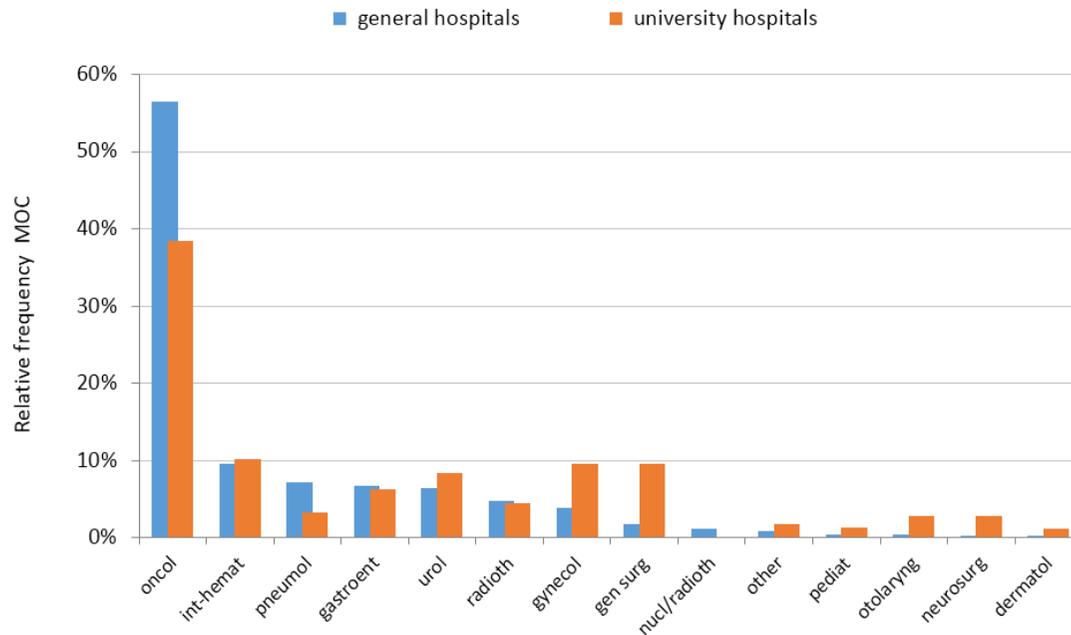
If we look at the figures for all hospitals (general and university together), we can see that most frequently medical specialists specialised in oncology (i.e. qualification code 660) coordinate MDT meetings (52.8%). Other specialties each account for less than 10% of cases; in descending order they are: internist-haematologists (9.9%), urologists (6.8%), gastroenterologists (6.6%), pulmonologists (6.3%), gynaecologists (5%), radiotherapists (4.7%) and general surgeons (3.3%).



When we examine the results by hospital type, then we see that oncologists are less frequently responsible for coordination in university hospitals than they are in general hospitals (38.5%, as opposed to 56%), but are still the group which most frequently take on this role. We also found that in university hospitals, general surgeons are much more likely to act as

coordinators (9.6%, as opposed to 1.7%); gynaecologist coordinators are also more frequent in university hospitals (9.6%, as opposed to 3.8%). ‘Smaller’ specialties such as ENT, neurosurgery, paediatrics and dermatology also provide coordinators in university hospitals (percentages between 3 and 1%), while this is far rarer in general hospitals.

**Figure 17 – Specialty of MDT meeting coordinator by type of hospital - 2011**



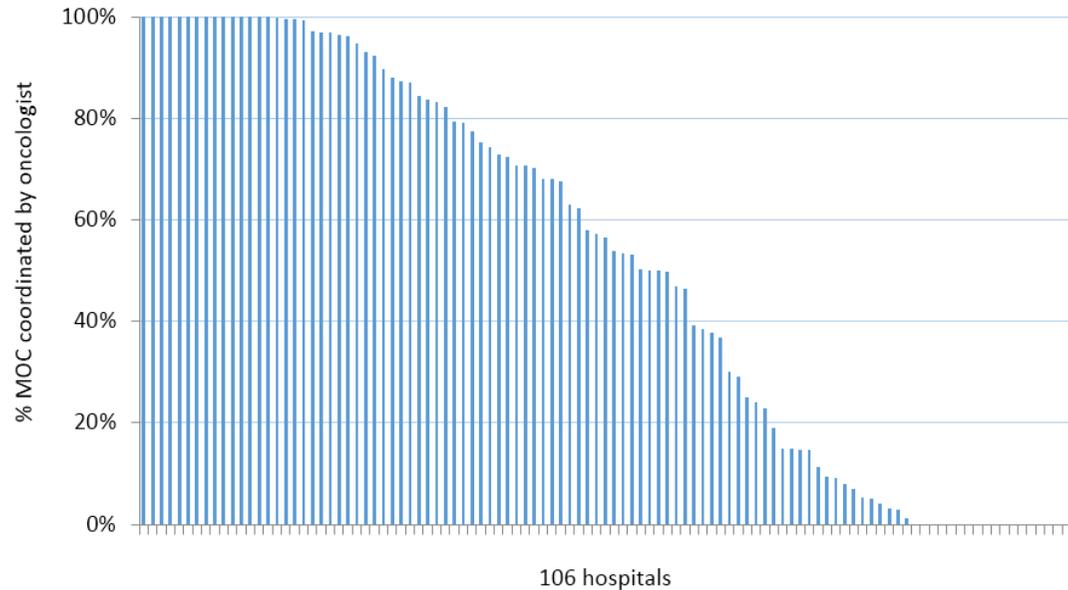
Datasource: RIZIV-INAMI doc P booked ≤ 30/06/2013

As already stated, in general oncologists most frequently take on the role of coordinators, in, on average, 52.8% of cases. Figure 18 shows the distribution of this parameter per hospital. It shows that situations still differ

greatly. In some hospitals, all the MDT meetings are coordinated by the oncologist (100%), whilst in others, these specialists never take on this role.



**Figure 18 – Percentage of MDT meetings coordinated by oncologist – per hospital - 2011**



Data source: doc P booked  $\leq$  30/06/2013; Note: code 660; base = total N of number of MDT meetings with coordination fees

Specific analyses presented in the appendices show some examples of hospitals with an atypical qualification profile compared to the average of all hospitals. In the first four hospitals, the MDT meeting is coordinated exclusively by a surgeon, radiotherapist, pneumologist or gastroenterologist. In other hospitals MDT meetings are coordinated exclusively by urologists and gynaecologists, or exclusively by pneumologists, gynaecologists and ENTs, or exclusively by an internist-haematologist.

#### 4.3.3.2 Qualification of participants (not taking into account the coordinator of the MDT meeting)

Table 8 shows the qualification of the participants for general and university hospitals as a whole. In total, there were 379 917 participations in 2011. The table includes the disciplines with at least 3000 participations. The disciplines are listed in descending order of the number of cases. Radiotherapists and pathologists are the most frequent participants, representing respectively 18.9% and 16.8% of the total number of participations. The next most frequent participants are oncologists (11.1%), radiologists (11.1%), general surgeons (9.7%), gynaecologists (4.8%) and urologists (4.4%). General practitioners represent 0.8% of participations.



**Table 8 – Qualification of MDT meeting participants - 2011**

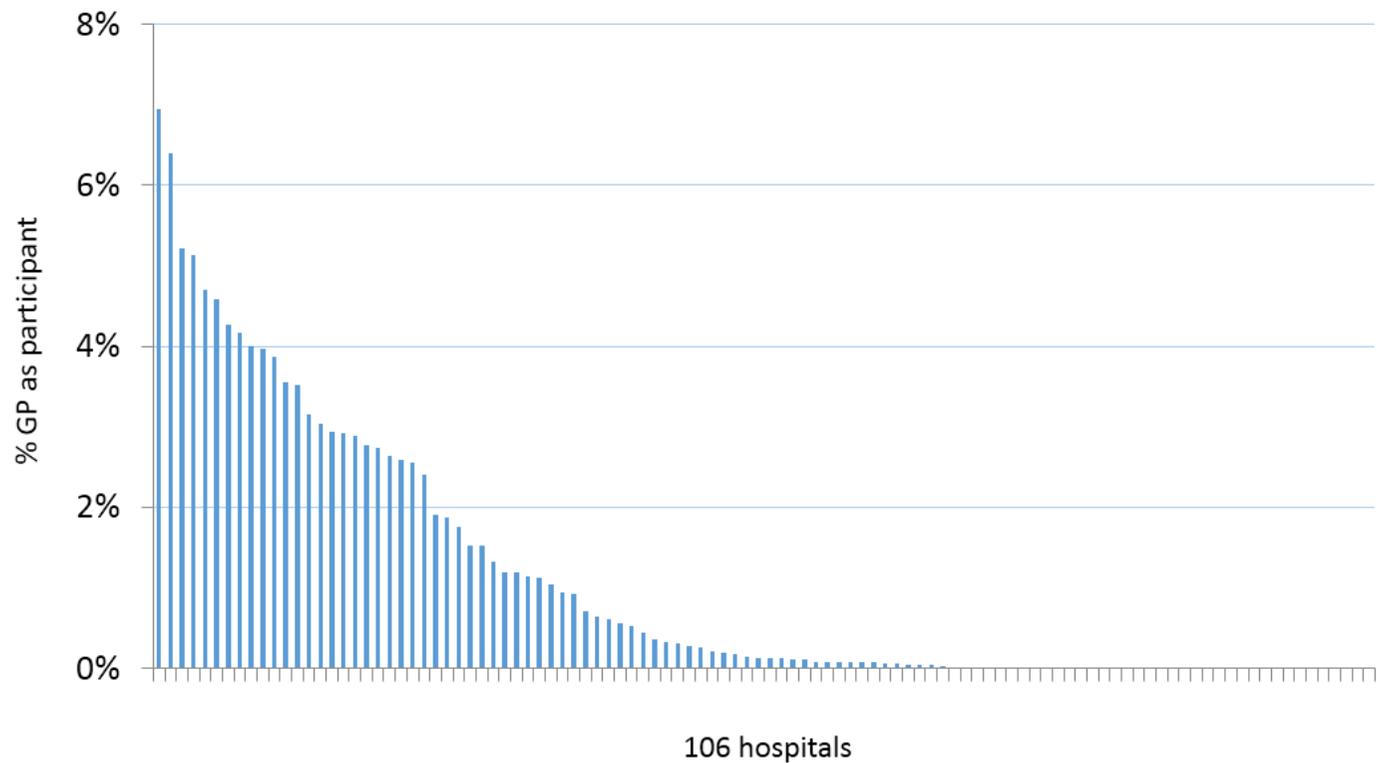
Qualification	Radio therap	Pathol	Oncol	Radiol	Gen Surg	Gyne col	Urol	Gastro enter	Nucl	Int-hemat	Pneu mol	Intern	Nucl/ Radioth	Oto laryng	Clin biol	GP	other	TOTAL
Code	960	870	660	930	140 149	340	450	650 659	970	598	620 624	580	550	410 414	860	003 004	xxx	
N	71 827	63 938	42 053	42 001	37 021	18 297	16 622	16 294	13 555	9 395	9 266	5 374	4 533	4 099	3 875	3 198	18 569	379 917
%	18,9%	16,8%	11,1%	11,1%	9,7%	4,8%	4,4%	4,3%	3,6%	2,5%	2,4%	1,4%	1,2%	1,1%	1,0%	0,8%	4,9%	100%

Data source: doc P booked ≤ 30/06/2013

Figure 19 shows the distribution for general practitioners; they also only take on the role of participant. In approximately half of the hospitals, there is never a GP attending the MDT meetings. The maximum frequency of GP participation is 7%.



Figure 19 – Percentage GP participation per hospital - 2011



Datasource: doc P booked ≤ 30/06/2013; Note. code 003 + 004; base = tot N of participants



**4.3.3.3 Qualification of MDT meeting medical specialists in general**

Table 9 shows at national level the qualification of medical specialists who are present at a MDT meeting, irrespective of their role, either as coordinator or participant. In total, in 480 061 times the participation of medical specialists was recorded at a MDT meeting; the table contains the disciplines with at least 3 000 cases. The disciplines are listed in descending order of the number of cases. Oncologists are most often involved in MDT meetings; 19.8% of the medical specialists who are present at a MDT meeting are oncologists. They are followed by radiotherapists (15.9%), pathologists (13.3%), radiologists (8.8%) and general surgeons (8.4%). These are followed by urologists (4.9%), gynaecologists (4.8%), gastroenterologists (4.8%), haematologists (4%) and pneumologists (3.3%).

**Table 9 – Qualification of physicians attending MDT meetings, regardless of their role (coordinator or participant) - 2011**

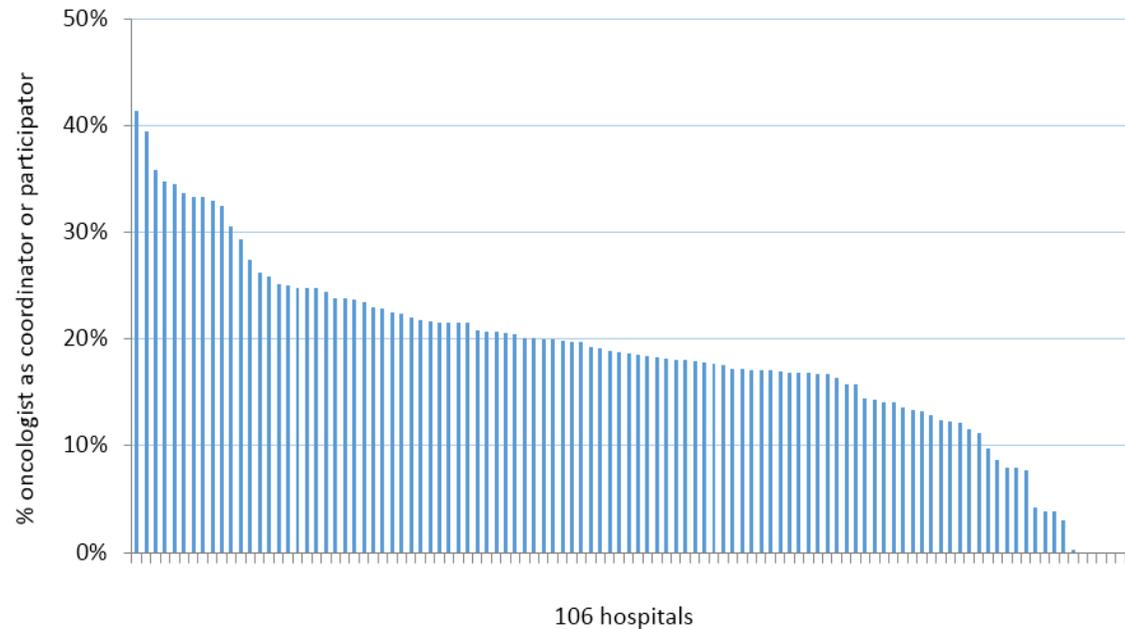
Qualification	Oncol	Radio therap	Pathol	Radiol	Gen Surg	Urol	Gyne col	Gastro enterol	Intern-hemat	Pneu mol	Nucl Med	Intern	Nucl/ Radioth	Oto laryng	Clin Biol	other	TOTAL
Code	660	960	870	930	140 149	450	340	650 659	598	620 624	970	580	995	410 414	860	xxx	
N	94 920	76 510	63 943	42 028	40 346	23 417	23 261	22 915	19 298	15 619	13 590	5 554	5 508	4 997	3 878	24 277	480 061
%	19,8%	15,9%	13,3%	8,8%	8,4%	4,9%	4,8%	4,8%	4,0%	3,3%	2,8%	1,2%	1,1%	1,0%	0,8%	5,0%	100%

Data source: doc P booked ≤ 30/06/2013



Oncologists (Figure 20) represent in some hospitals more than 35% of the presences at a MDT meeting, but less than 5% in others. Other figures are presented in the appendices, and show the distribution for some organ specific specialties as urology, gynaecology, gastroenterology and pulmonology; again we see a large variation.

**Figure 20 – Percentage oncologist as coordinator or participant per hospital attending a MDT meeting - 2011**



Data source: doc P booked ≤ 30/06/2013; Note: code 660; base = total N of physicians attending a MDT meeting, coordinator or participant



From Table 10, we can deduce at a national level the extent by which a particular discipline takes on the role of 'coordinator' more often than that of 'participant'. We can therefore see that oncologists, the group that is most frequently involved in MDT meetings, are coordinators in 56% of cases and vice versa participants in 44% of cases. Radiotherapists are primarily present as participants (94%); pathologists and radiologists act only as participants (100%). These are followed by the surgical specialties, with

general surgeons being predominantly present at MDT meetings as participants (92%); the MDT meetings in which they appear as coordinators are primarily in university hospitals, as shown earlier. Gynaecologists and, in particular, urologists, take on the role of coordinator somewhat more frequently (21% and 29% respectively). We also note that haematologists and pneumologists regularly take on a coordination role (51% and 41% respectively).

**Table 10 – Physicians attending MDT meetings, function (coordinator or participant) per qualification - 2011**

Qualification	Oncol	Radio therap	Pathol	Radiol	Gen Surg	Urol	Gyne col	Gastro enterol	Intern-hemat	Pneu mol	Nucl Med	Intern	Nucl/ Radioth	Oto laryng	Clin Biol	other	TOTAL
Code	660	960	870	930	140 149	450	340	650 659	598	620 624	970	580	995	410 414	860	xxx	
Total N as coord or partic	94 920	76 510	63 943	42 028	40 346	23 417	23 261	22 915	19 298	15 619	13 590	5 554	5 508	4 997	3 878	24 277	480 061
N as coord	52 867	4 683	5	27	3 325	6 795	4 964	6 621	9 903	6 353	35	180	975	898	3	2 510	100 144
%	56%	6%	0%	0%	8%	29%	21%	29%	51%	41%	0%	3%	18%	18%	0%	10%	21%
N as partic	42 053	71 827	63 938	42 001	37 021	16 622	18 297	16 294	9 395	9 266	13 555	5 374	4 533	4 099	3 875	21 767	379 917
%	44%	94%	100%	100%	92%	71%	79%	71%	49%	59%	100%	97%	82%	82%	100%	90%	79%

Data source: doc P booked ≤ 30/06/2013



### 4.3.3.4 Qualification of “the informer”

A physician who informs the patient about the outcome of the MDT meeting, hereafter referred to as the ‘informer’, can charge a fee for this. This service, hereafter referred to as a ‘debriefing’, can only be charged after a primary MDT meeting (codes 350372 and 350383), not after a ‘follow-up’ or a ‘second opinion’ MDT meeting. The qualification of this informer will be analysed further in this section. The number of debriefings is, as shown earlier in the national data, relatively limited in relation to the number of primary MDT meetings, i.e. 16 583 as compared with 66 379 (i.e. 25%).

Table 11 shows that urologists and gynaecologists are the most frequent informers (registered), as they carry out 21.6% and 18.6% of the total number of debriefings. They are followed by pneumologists, oncologists and gastroenterologists, who carry out 11%, 10.3% and 9.4% of debriefings respectively. General practitioners carry out only 3% of debriefings. An analysis by hospital showed that there is a large variation per hospital: some hospitals apparently organise these debriefings systematically (ratio around 1), other rarely or never (figure in appendix C).

**Table 11 – Qualification of physician who debriefs patient after MDT meeting - 2011**

Qualification	Gyne col	Urol	Pneu mol	Oncol	Gastro enterol	Gen Surg	Int-hemat	Oto laryng	GP	Radio therap	Derma tol	Neuro surg	Ped	Intern	Stoma tol	other	TOTAL
Code	340	450	620 624	660	650 659	140	598	410 414	003 004	960	550	170	690	580	520	xxx	
N	3 528	3 038	1 796	1 679	1 542	1 070	822	741	491	440	271	192	178	149	127	273	16 337
%	21.6%	18.6%	11.0%	10.3%	9.4%	6.5%	5.0%	4.5%	3.0%	2.7%	1.7%	1.2%	1.1%	0.9%	0.8%	1.7%	100%

Data source: doc P booked ≤ 30/06/2013

Note: MDT meeting: code 350232, 350254, 350265

## 4.4 Conclusion – discussion

### 4.4.1 Time taken to book the MDT meetings

The MDT meetings carried out in certain hospitals are booked very late by the sickness funds, which indicates that the billing process there goes very slowly. In some hospitals, the MDT meetings carried out in 2011 were, for the most part, booked in 2012 or even later. This slow billing process compromises the data analysis, surely at hospital level, because a reliable analysis assumes that a complete sample is used and this is only available after a few years. If, for example, the billing and booking information up to 2013 is available, this only gives a complete picture of the MDT meetings that took place in 2011. If these data are linked to other information, the delay becomes even longer.

The reasons for this slow billing/booking process are unclear, but the following hypotheses may be put forward:

- The MDT meeting is an atypical service, since this is carried out without the patient being present. A report is one of the conditions, according to the nomenclature. It is possible that there may be a long wait for this report, which may still need to be approved by the various participants.
- There may also be a delay in billing the MDT meeting within the hospital because various healthcare providers are involved in this, and some billing and accumulation rules in the nomenclature need to be checked.
- There may also be a delay in the MDT meeting being booked by the sickness funds. The nomenclature specifies, for example, that the sickness funds advising physician should also receive the report. The possibility cannot be ruled out that validation of the report at this level may be a delaying factor.

### 4.4.2 Benchmarking of MDT meeting activities

By relating the number of MDT meetings to the number of chemotherapy patients, we get a rough idea of how these services are used in hospitals. We find that this varies considerably and that the frequency of MDT meetings varies in hospitals that have the same level of oncological activity, measured by the number of chemo patients. This raises the question as to whether MDT meetings in some hospitals are organised for situations where this does not really add value, for example for tumours for which the treatment is fully standardised and not open to discussion. Conversely, one may ask whether ‘too few’ MDT meetings are perhaps carried out in some



hospitals and invasive treatments are started for tumours for which different therapeutic options exist and prior multidisciplinary consultation is useful.

The analyses further show a large inter-hospital variation in number of follow-up MDT meetings. In some hospitals the number of follow-up MDT meetings exceeds the number of primary MDT meetings.

#### *4.4.3 Studying the qualification of MDT meeting medical specialists*

##### *4.4.3.1 Qualification of the coordinator*

The coordinator plays an important role in the MDT meeting since he/she, according to the nomenclature, draws up the report of the meeting, which includes the diagnosis, prognosis and the proposed treatment. This coordinator therefore receives a different, far higher fee than the participants (K80, as opposed to K17). This coordinator, therefore, should presumably have sufficient expertise to carry out this task.

Generally, medical specialists in oncology, a relatively new discipline, most often take on the role of coordinator (in 52.8% of cases). They are followed by internist-haematologists, urologists, gastroenterologists, pneumologists, gynaecologists, radiotherapists and general surgeons (percentages from 9.9% to 3.3%). In university hospitals, oncologists take on the coordination role somewhat less frequently, but surgeons and gynaecologists are more frequently involved as coordinators. Other specialties are also mentioned in university hospitals (ENT, neurosurgery, paediatrics, dermatology ).

If we compare this situation with that of a few years before, we find that, in 2008, internists most frequently coordinated MDT meetings, whereas they hardly appear in the current analysis of 2011. These medical specialists have presumably re-qualified as oncologists and also as internist-haematologists, specialties that in 2008 were inexistent and in 2011 reach 52.8% resp. 9.9% of MDT meeting coordinatorship.

Some hospitals have a rather atypical coordinator profile, compared to the national average. In some hospitals, MDT meetings are exclusively coordinated by one or a few organ-specific specialties (for example, surgery, gastroenterology, urology, gynaecology); the question arises as to whether these medical specialists have received sufficient multidisciplinary training to cover oncology as a whole.

##### *4.4.3.2 Qualification of the MDT meeting participants*

The maximum number of refundable participation fees is four; in case of participation of an extramural physician it is five. When interpreting these results we should take into account that in some cases this maximum can be reached and not all physicians present at MDT meetings are registered in billing data.

Radiologists and pathologists are only present at MDT meetings as participants, and almost never as coordinators. At a national level, they make up a significant proportion of the participations, 17% and 11% respectively. They can give interesting information on the stage of the tumour based on medical imaging and laboratory examination of tissue. If we look at the distribution at hospital level, we find considerable differences; in some hospitals these medical specialists participate regularly to MDT meetings (to 30%), in others much less. We should take into account that not all hospitals have an own laboratory for pathology and that participation of an external pathologist can be more difficult to organise.

General practitioners also only attend MDT meetings as participants; they make up a small proportion of the total number of participations, notably 0.8%. There are presumably organisational reasons for the limited participation of this health professional group. GP's, however, can provide useful information about the general condition of the patient, his comorbidities, his psychological capacity and social situation, which are factors that can be useful when taking a decision as to whether to carry out possible invasive treatments.

##### *4.4.3.3 Qualification of MDT meeting attending medical specialists in general*

If we look in general at which disciplines are present at MDT meetings, irrespective of their role (as coordinator or participant), then we find that oncologists form the largest group, representing 19.8% of the total. They are followed by radiotherapists, pathologists, radiologists and general surgeons (percentages from 15.9% to 8.4%). These are followed by urologists, gynaecologists, gastroenterologists, haematologists and pneumologists (percentages from 4.9% to 3.3%).



The same calculation was carried out at hospital level for the most common disciplines. Oncologists can play an important role in MDT meetings and their presence, as coordinator or participant, can be expected in a considerable part of them. Yet we see an underrepresentation in some hospitals. In view of the fact that oncology is a new specialty, it is possible that not every hospital already has a dedicated oncologist. It can be useful to re-evaluate this item on more recent data in a few years.

For organ-specific disciplines (e.g. urologists, gynaecologists, gastroenterologists and pulmonologists) we also see a large inter-hospital variation. However, it is not excluded that in some hospitals a MDT meeting is requested by some specialists but these specialists themselves actually do not attend the MDT meeting.

#### 4.4.3.4 *Qualification of the informer*

A physician who informs the patient about the outcome of the MDT meeting can charge a fee for this debriefing (in the case of a primary MDT meeting). The national data show that, on average, only one in four primary MDT meetings is followed by such a debriefing. This service was introduced into the nomenclature at the end of 2010 and it is possible that the frequency will be higher in more recent data (the current analysis covers 2011).

Urologists and gynaecologists most frequently take on the role of informer (21.6% and 18.6% of the total, respectively). They are followed by pneumologists, oncologists and gastroenterologists (percentages from 11.0% to 9.4%). General practitioners represent just 3% of cases.

Analysis at hospital level shows – in contrast with rather low national average – that some hospitals organise these debriefings systematically (and other seldom).

## 4.5 Key messages

### Time taken to book the MDT meetings

- **The billing/booking process for MDT meetings takes much more time than the general billing/booking process. In some hospitals, an extreme delay is noted. This slow billing process compromises the evaluation of MDT meeting activity, surely at hospital level, because a complete sample is not available until many years later and there is thus a time-lag.**

### Benchmarking of MDT meeting activity

- **It is not easy to assess whether MDT meetings are being used appropriately by looking at the billing data alone, given that the nomenclature codes are not very specific. If we compare the number of primary MDT meetings with the level of oncological activity, estimated by the number of chemo patients, then we still observe a considerable variation between hospitals. This raises the question as to whether MDT meetings in some hospitals are organised for cases where this does not have any clear added value, and vice versa. Based on the present billing data, no conclusive answer can be given about this.**
- **There is an important interhospital variation in number of follow up MDT meetings. In some hospitals the number of follow-up MDT meetings exceeds the number of primary MDT meetings.**

### Studying the qualification of MDT meeting physicians

- **According to the nomenclature, the coordinator has an important function within the MDT meeting; the size of his fee is also in line with this. In 2011, oncologists were the most important coordinators; in 2008, it was the internists, but they have presumably re-qualified as oncologists and also as internist-hematologists. If we analyse this by hospital, then we find that oncologists do not appear in the data in a significant number of hospitals, not as coordinator and even not as participant. This may look different in more recent data, since oncology is a new specialty and it is possible that not every hospital already has a dedicated oncologist. In some hospitals, MDT meetings are coordinated by one or a few organ-specific disciplines, which raises the question as to whether they have sufficient multidisciplinary knowledge to cover the full range of tumors.**



- Radiologists and pathologists attend MDT meetings regularly as participants; at hospital level, we find that this varies significantly and in some hospitals these specialists participate relatively seldom. For pathologists there can be practical reasons (external pathology laboratory).
- The participation of general practitioners in MDT meetings is, generally speaking, very limited, presumably for organisational reasons. Interpreting these results we should take into account that in some cases the maximum number of refundable fees can be reached (4 to 5) and not all present participants are registered in the billing data. This remark also applies for following results.
- For organ-specific disciplines (e.g. urology, gynaecology, gastroenterology, pneumology) we also see a large inter-hospital variation in their presence at MDT meeting. It is not excluded that in some hospitals MDT meetings are requested without the presence of these specialists at the discussion, which could explain lower values.
- Finally, we note that only one in four primary MDT meetings is followed by the debriefing service that is allowed for in the nomenclature. The code in question was only introduced at the end of 2010; the frequency of this may be higher in more recent data.  
Nevertheless if we carry out the analysis at hospital level we see that some hospitals systematically organise these debriefings and other almost never.

## 5 MDT MEETINGS IN BELGIUM - EXPERIENCES AND PERCEPTIONS OF ITS PARTICIPANTS

### 5.1 Introduction and objectives

We conducted an online survey to give an overview of the current practice of multidisciplinary team (MDT) meetings in Belgium and more precisely to answer the following research questions:

- Today, how are MDT meetings organized in the Belgian hospitals?
- Who attends the MDT meetings (including the GP and paramedical staff)?
- How is the transfer of information organized between the hospitals, sickness funds and Belgian Cancer Registry?
- What are the barriers and opportunities for a more efficient organization of the MDT meetings?

### 5.2 Methodology

#### 5.2.1 Data collection

The survey was conducted online (web-based) using Lime Survey®. Lime Survey, an open Source Survey Software, is a web-based interface for the creation and administration of online surveys. It offers good support for research surveys.

#### 5.2.2 Population, sampling and recruitment

The web-survey was carried out at the national level, dedicated to all hospitals registered with a program in oncology.

All hospital coordinators (administrative contact persons) identified by the Belgian Cancer Registry (BCR) received an e-mail describing the aim of the survey and inviting them to transmit to the KCE the email addresses of every participant of the MDT meeting(s) organized in their hospital, whatever their competency or their role in the MDT meetings.

In total, 153 coordinators from 112 centres with a program in oncology were contacted per e-mail. We also searched for email addresses on the websites of those hospitals that could not be reached. Hospitals for which no coordinator's email address were received, were invited by email to send an



email to the members of their MDT meeting(s) in order to invite them to register themselves directly to the KCE.

On the basis of the whole list of potential participants, the KCE sent a personal email with the invitation to complete the websurvey; it included a unique code to access the online survey and the procedure to follow.

Between May 22<sup>nd</sup> and June 15<sup>th</sup> 2014, 4 203 people received a personal e-mail from KCE. It is very well possible that MDT meeting participants who work in more than 1 hospital, have received more than 1 email. Duplicates were unfortunately undetectable if the participant had more than one email address.

Two reminders were sent to non-responders, each time a week after the previous mailing, as recommended in several methodological reference documents.<sup>70, 71</sup>

The invitation can be found in appendix D.

### 5.2.3 Questionnaire development process

Themes and questions of the questionnaire were inspired from an Australian survey on MDT meetings,<sup>50</sup> and from the results of the literature review presented in chapter 2. In addition, the authors attended several MDT meetings to get an idea of the practical process of MDT meetings.

The whole questionnaire consisted mainly of closed-ended questions with some open-ended questions when additional information could have an added value. The majority of the questions were mandatory.

The questionnaire was first developed in French. The definitive version was then translated in Dutch. The usefulness and the formulation of each question was discussed within the research team involving medical, paramedical, statistical, juridical and social science expertise. A draft version was also sent to several experts in the field for comments and suggestions. Several rounds of revision were executed before pre-testing in both languages was performed. The objective of the pre-test was to verify the formulation of the questions (clarity, comprehension), the completeness of the questionnaire and the technical aspect of the survey. There was also space for free comments. The pre-test was performed by 6 coordinators in oncology, i.e. 3 Dutch-speaking and 3 French-speaking. It led to light modifications of the questionnaire.

The pre-final online version was finally tested for technical aspects by the members of the research team.

### 5.2.4 Anonymity

The survey was not performed anonymously because the software required an identification by email, allowing participants to complete their questionnaire in several times. Nevertheless, the analyses were performed ensuring confidentiality of the responses.

### 5.2.5 Survey process and structure

When respondents entered the link to the web-survey mentioned in their invitation or reminder letter, they arrived at a welcome page, where they had to enter their personal code and choice of language to be able to continue. The welcome page also allowed for signing out of the survey.

The survey contained:

- a set of 'identification' questions (such as age, gender, professional activity, the field of medical specialization for the physicians, and which proportion of their activities was related to oncology; non-physicians were asked about their involvement in coordination of care);
- a set of questions on the hospital (size, university hospital and non-university hospital, type of program of care in oncology);
- a set of questions on the participation in the MDT meetings;
- a set of questions on the last MDT meeting attended:
  - organizational aspects;
  - theme/cancer(s) discussed;
  - the coordination role (or not) of the respondent;
  - the (non) participants (number, profession, field of activities);
  - patients who were discussed (number, time per patient, definition of the clinical stage defined, criteria used to define the treatment, definition of pathological stage);
  - follow-up of the MDT meeting;
  - the use of the guidelines: systematic for every patient or not (and if not, why?), types of clinical recommendations followed;
  - technical resources used (information, medical file, imaging, pathological results);
  - reporting of discussions and decisions in the medical file of the patient.



- a set of questions on the perceptions of the respondents:
  - on the MDT meeting about invasive cancers: patients discussed, cancer types not discussed, and the reason for not discussing them;
  - on the content of the MDT meeting: opinion on the timing of the MDT meeting in the clinical path, aspects discussed, missing aspects,
- a set of questions on the perceived advantages and weaknesses of the MDT meetings (and their importance);
- a set of questions on administrative aspects (only for coordinators of care, coordinators of MDT meetings and data managers): billing, transfer of the data to the Belgian Cancer Registry, reason(s) for not billing some patients, delay to write and sign the MDT meeting report, types of MDT meetings in the hospital, check of the adherence to the manual of oncology and reasons for the non-transmission of the diagnosis to the Belgian Cancer Registry.
- a set of questions on the implication of the general practitioners (GPs) in the MDT meetings: (systematic) invitation of the GPs, when, how long before the meeting, how they are invited, the frequency of their participation, their contribution to the decisions, the information of the GPs on the discussions, the way that the GP is informed of the decision;
- a question on the information of the patient on the decisions of the MDT meeting;
- an open-ended question allowing comments or suggestions about the MDT meetings in general.

The full questionnaire, in Dutch and French, can be found in appendix D.

### 5.2.6 Data analysis

All analysis were conducted in SAS Enterprise Guide 6.1.

### 5.2.7 Discussion of the results with respondents

At the end of the survey, respondents were asked whether they were interested in participation in a group discussion to further elucidate and comment on the results of the web survey.

Candidates were invited to follow a link to the KCE website where they could register. In that way, there was no direct link between the answers to the survey and the coordinates of the candidates for the discussion groups. The group discussions (one in French, one in Dutch) took place in September 2014.

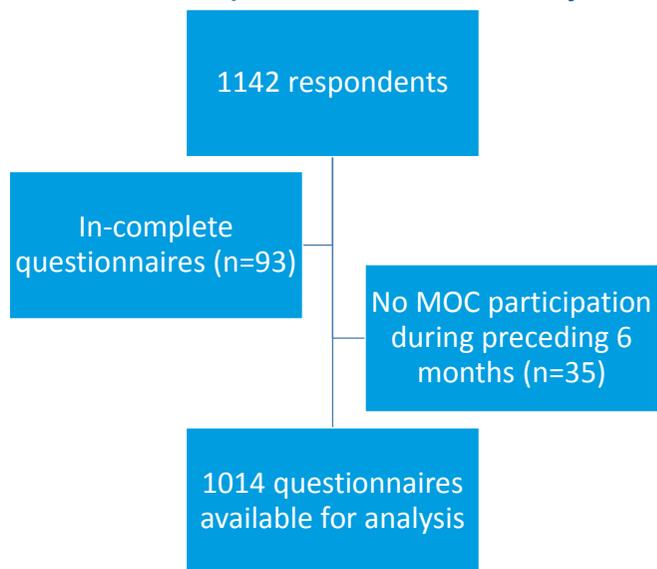
## 5.3 Results

### 5.3.1 Response rate

We sent the invitation to participate to the questionnaire to 4 203 email addresses. In total, 1 142 persons participated in the survey giving a response rate of 27.2%. Of those 1 142 respondents, 93 did not fill in the questionnaire completely. Another 35 respondents did not attend a MDT meeting during the preceding 6 months and hence were excluded from the rest of the survey (as it was believed that they could not inform us in a profound way). Finally data from 1 014 MDT meeting participants were available for analysis.



**Figure 21 – Number of respondents to the web survey**



**5.3.2 Sample characteristics**

The 1 014 respondents work in 74 different hospitals.<sup>f</sup> Table 12 describes their sociodemographic characteristics and Table 2 their professional activities. As expected, most of the participants of the survey are between 30 and 60 year old (10% were elder), good balance between French and Dutch speaker, with a bit more male (55%) participants and specialized medical doctor as the majority (82%) of the panel.

**Table 12 – Sociodemographic characteristics of the respondents (N = 1 014)**

	n	%
<b>Age</b>		
<30 year-old	43	4.2
31-40 year-old	270	26.6
41-50 year-old	325	32.1
51-60 year-old	272	26.8
60+ year-old	104	10.3
<b>Gender</b>		
Male	557	54.9
Female	457	45.1
<b>Language of the questionnaire</b>		
French	512	50.5
Dutch	502	49.5

**Table 13 – Professional characteristics of the respondents (N = 1 014)**

	n	%
<b>Professional activity</b>		
Specialized medical doctor	834	82.2
Nurse	72	7.1
Psychologist	40	3.9
Data manager	25	2.5
Dietician	13	1.3
Administrative personnel	8	0.8

<sup>f</sup> In 2013, 106 hospitals were registered with a care programme for basic oncological care and/or an oncology care programme.



	n	%
Social worker	5	0.5
Physician (in speciality training)	5	0.5
Other	4	0.4
General practitioner	3	0.3
Speech therapist	2	0.2
Physiotherapist	2	0.2
Technician (e.g. medical imaging, lab analytics)	1	0.1
Dentist	0	0.0
<b>Specialist physician (including in training)</b>		
Yes	839	82.7
Other	175	17.3
<b>Frequency of MDT meeting participation</b>		
More than once per week	278	27.4
About once per week	492	48.5
About once per fortnight	133	13.1
Less than once per fortnight	111	10.9
<b>Mobility</b>		
Move from a hospital or a site to another to participate in MDT meeting	548	54.4

	n	%
Surgeons (N= 202)	84	41.6
Oncologists (N=106)	63	59.4
Medical imaging specialists (N=117)	44	37.6
Pathologists (N=70)	38	54.3
Radiotherapists (N=63)	53	84.1
Other medical specialists (N=320)	138	43.1

In our sample, 61 nurse respondents were Coordinators of care in oncology (CSO/onco-coach<sup>9</sup>). They represented 79% of the nurses of the sample. Additionally, 3 CSO/onco-coaches were dieticians, and 1 was speech therapist.

More than 50% of respondents moved from a hospital/site to another. This is unsuspectedly high proportion was explained by the participants of the discussion meetings as a result of the fact that physicians who work in multisite hospitals answered positively to the question, while they actually do not move uniquely to attend MDT meetings. Nevertheless, and confirming partly this hypothesis, results clearly illustrated that radiotherapists are moving much more than other specialists and that specialists in medical imaging are not often moving.

Table 14 illustrates that there are a lot of “small” hospitals (i.e. less than 400 beds) represented in the web survey sample with a mean of 6 respondents per hospital. The majority of the respondents (48%) came from hospitals with more than 800 beds (with, in average, 27 respondents per hospital).

<sup>9</sup> The function of coordinator of care in oncology has no devoted title. The respondents of the survey reported more than 15 different names for the function.

**Table 14 – Number of respondents per hospital and size of hospital**

Number of beds per hospital	Number of hospitals	Percent	Number of respondents	Percent	Mean number of respondents per hospital
Missing**	0	0.0	4	0.4	.
under 400 beds	34	45.9	199	19.6	6
401-600 beds	16	21.6	168	16.6	10
601-800 beds	7	9.5	157	15.5	22
above 800 beds	17	23.0	486	47.9	27
<b>TOTAL</b>	<b>74</b>	<b>100.0</b>	<b>1 014</b>	<b>100.0</b>	

Note: hospital = not by site \*\* Identification of the hospital was not possible



Table 15 – Respondents by type of hospital

Type of hospital	Number of respondents	% (N = 1 014)
General hospital	567	55.9
University hospital*	439	43.3
Missing	8	0.8

\* including general hospital with university beds

University hospitals as well as non-university hospitals are represented. Among university hospitals, 73% reported that the number of beds were higher than 800, compared to 30% in the general hospital. There is a direct link between the size of the hospital and the type of hospital. Therefore, we choose to present only data according to hospital size, and not by hospital type.

Table 16 shows more specific results for specialists. Amongst specialists (N=839), 1 out of 4 specialists had surgery in his/her domain of activity and almost 3 out of 10 have, in addition or not, another medical specialties (e.g. pneumology, gastro-enterology, gynaecology, ) in his/her domain of activity. All results mentioning specialists also include in training specialists. Almost 50% of the specialists claimed to have more than 50% of their activity in oncology and 29% had exclusively or partly coordinated the last MDT meeting he/she attended.

Table 16 – Specialties of the medical specialist

Domain of activity	n	% (N = 839)
<b>Surgery</b>	<b>202</b>	<b>24.1</b>
Digestive surgery (abdominal)	75	8.9
General surgery	49	5.8
Breast surgery	47	5.6
Thoracic surgery (pulmonary)	28	3.3
Head and neck surgery	28	3.3
Digestive surgery (thoracic)	22	2.6
Neurosurgery	21	2.5
Plastic and reconstructive surgery	13	1.5
Maxillo-facial surgery	12	1.4
<b>Medical oncology</b>	<b>106</b>	<b>12.6</b>
<b>Medical imaging</b>	<b>116</b>	<b>11.4</b>
Radiology	76	9.1
Nuclear medicine	40	4.8
<b>Pathology</b>	<b>70</b>	<b>8.3</b>
<b>Radiotherapy</b>	<b>62</b>	<b>7.4</b>
<b>Other medical specialties</b>	<b>318</b>	<b>31.4</b>
Pneumology	65	7.7
Gastro-enterology	58	6.9
Gynaecology	54	6.5
Urology	48	5.7



	n	% (N = 839)
Haematology	47	5.6
Ear, nose and throat (ORL-NKO)	30	3.6
Hepatology (incl. pancreatology. biliary tract)	21	2.5
Endocrinology	20	2.4
Clinical Biology	16	1.9
Internal Medicine	12	1.4
Dermatology	11	1.3
Paediatrics	11	1.3
Palliative care	11	1.3
Neurology	8	0.9
<b>Activity in oncology</b>		
Less than 25	181	21.6
Between 25 and 50	237	28.2
Between 50 and 75	166	19.8
More than 75	238	28.4
Don't know	17	2.0
<b>Role in the last MDT meeting</b>		
Participant	595	71.0
Both roles. depending on patients discussed	142	16.9
Coordinator of the MDT meeting	101	12.1

*Note. several answers possible*

### 5.3.3 Functioning of the last MDT meeting attended by the respondents

For the following questions, the respondents were asked to focus only to the last MDT meeting they had attended; this was done in order to minimize recall bias.

#### 5.3.3.1 General vs. specific MDT meeting

In general MDT meetings, patients with different types of cancer are discussed in the same meeting while in specific MDT meetings only patients suffering from a certain type of cancer (e.g. breast cancer MDT meeting, colorectal MDT meeting, etc.) are discussed.

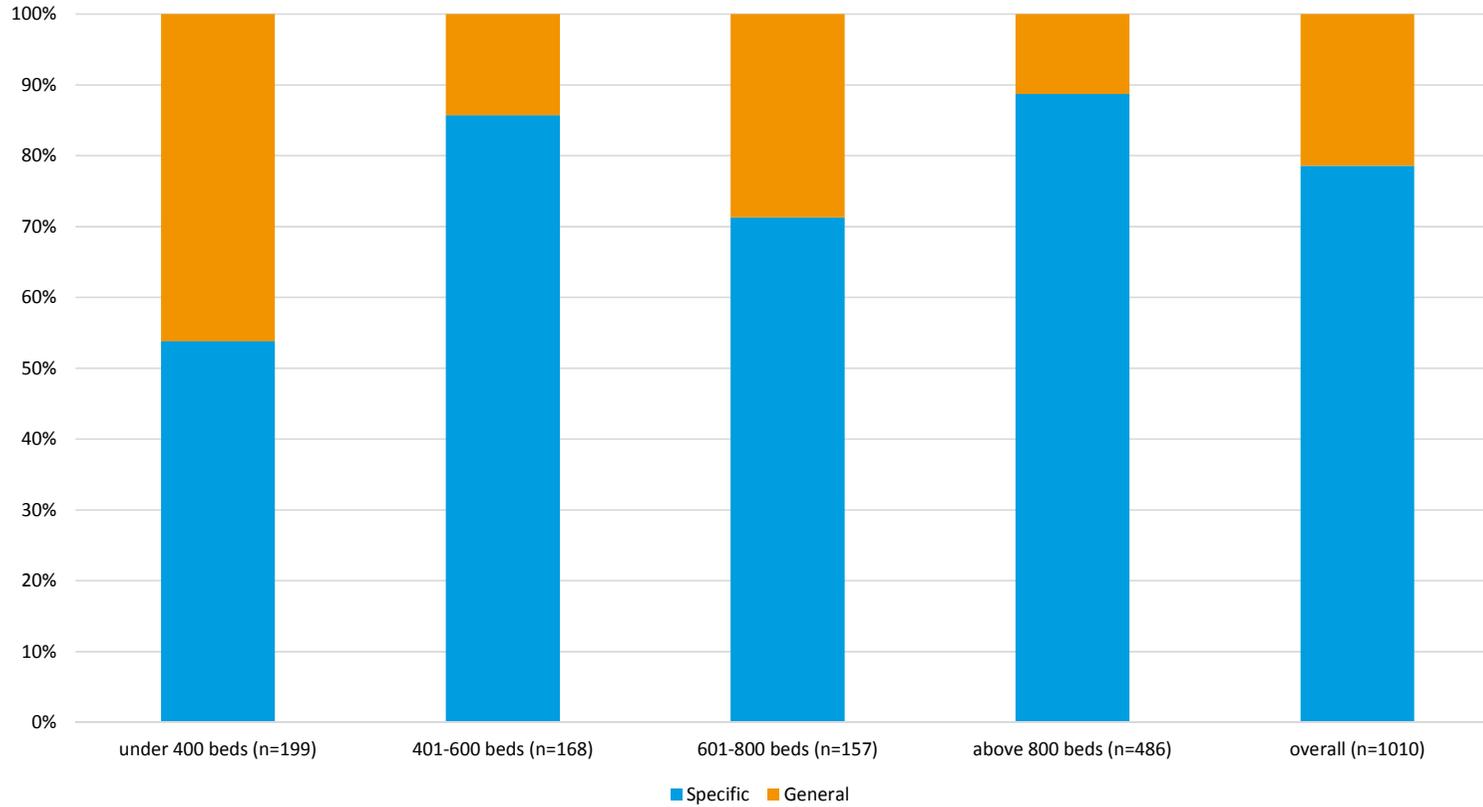
Nearly 80% of the respondents refer to a specific MDT meeting as the last MDT meeting they had attended. As Figure 22 shows, there are differences in the proportion of specific or general MDT meetings in function of the hospital size. These differences are statistically significant ( $p < 0.001$ ). These differences can be explained by the need to have a sufficient number of patients with a cancer type to organize specific MDT meetings.

According to the participants we met in the discussion meetings after the web survey, general MDT meetings are sometimes organized in such a way that cases are grouped by cancer type and the different specialists are coming and leaving in function of the cancer type.

The next figure shows the cancer groups of the last specific MDT meeting respondents had attended. The distribution corresponds roughly to the cancer incidences, more common cancer types being more frequently discussed in specific MDT meetings.



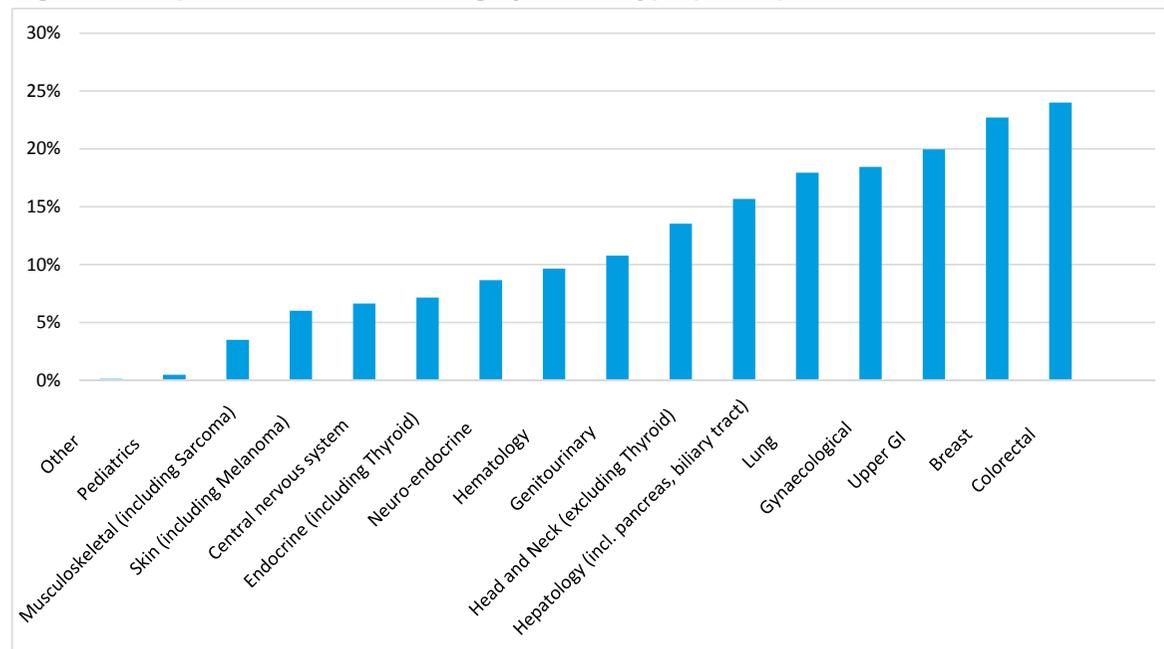
Figure 22 – General and specific MDT meetings by size of the hospital



\* 4 non identified hospitals



**Figure 23 – Specific last MDT meeting by cancer type (N=797)**



### 5.3.3.2 The participants

#### Number of participants (not including students)

Nearly 1 out of 2 respondents estimated that the number of attendants to the MDT meeting ranged between 6 and 10. There were slight, but statistically significant differences according to the hospital size ( $p = 0.028$ ).

**Table 17 – Number of participants of the last MDT meeting by hospital size**

	≤ 400 beds (N=197)		401-600 beds (N=168)		601-800 beds (N=157)		> 800 beds (N=483)		Total (N=1 005)	
	n	%	n	%	n	%	n	%	n	%
≤ 5	10	5.1	5	3.0	8	5.0	23	4.8	46	4.6
6-10	94	47.7	103	61.3	84	53.5	205	42.2	486	48.3
11-15	75	38.1	43	25.6	47	29.9	177	36.6	342	34.0
> 15	18	9.1	17	10.1	18	11.5	78	16.1	131	13.0

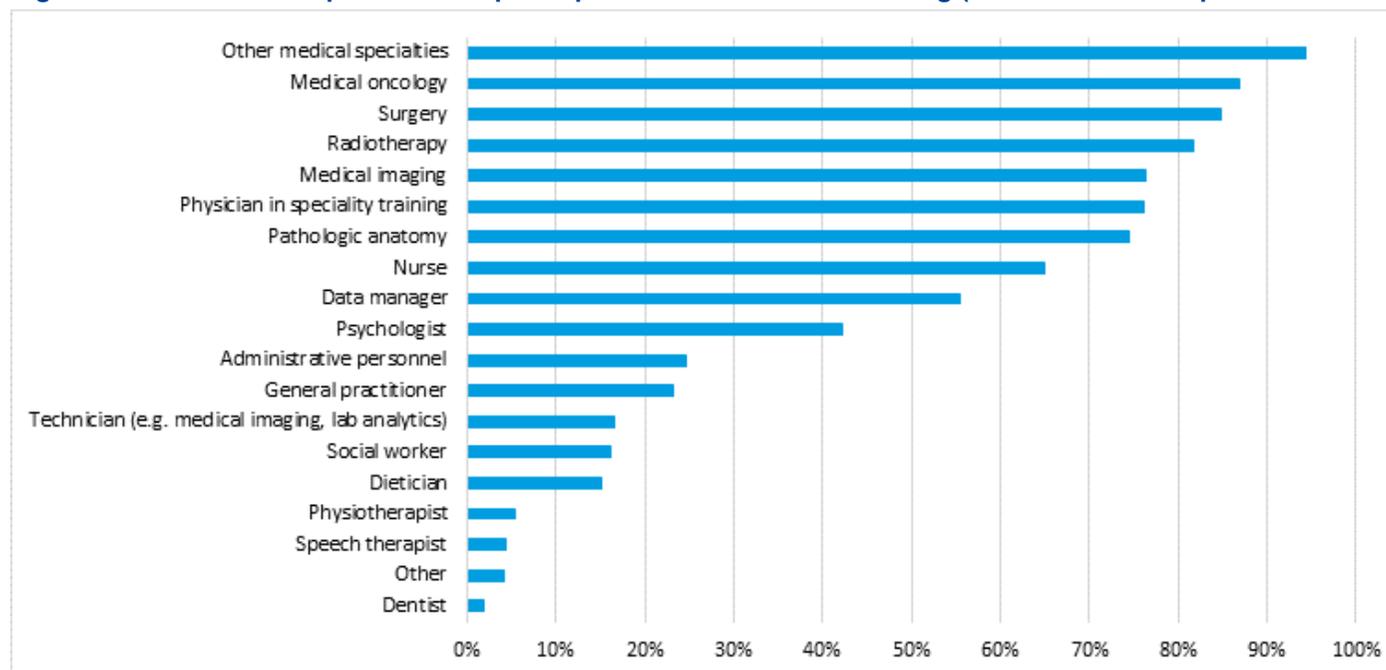
There is no difference in the number of attendants of the last MDT meeting according to the type of MDT meeting (General vs. specific).

#### Professional profile of participants

All expected professional profiles (according to the aim of a MDT meeting) attend MDT meetings but not every meeting (Figure 24).



Figure 24 – Professional profile of the participants of the last MDT meeting (internal to the hospital/site and external) (N=1 014)



The more represented specialties are medical oncology, surgery and radiotherapy. According to the respondents there was in less than 80% of the last MDT meetings they attended a specialist in medical imaging and pathology present.

The attendance of data managers and nurses was also mentioned by 55%-65% of the respondents. Nevertheless, this figure is probably slightly overestimated because the denomination 'data manager' could also encompass clinical research managers or onco-coaches.

More than 20% of the respondents cited the presence of a GP during the last MDT meeting they attended; this proportion was also judged as surprisingly high by the participants of the discussion meetings. They suspected a confusion between the GP of the patient and the GPs working in the hospitals (e.g. in geriatrics). Nevertheless, GP's participation differs

according to the hospital size. They are more present in COM meetings organized in small hospitals than in big hospitals (see data in appendix D). This difference is statistically significant ( $p < 0.001$ ). It is therefore logical that GPs are also more often represented in general MDT meetings than in specific ones (40.3% vs. 18.9%;  $p < 0.001$ ).

#### Missing participants in the last MDT meeting

Among the respondents, 123 (12.1%) participants deplore the absence of one or more actors during the MDT meetings. It concerns mainly medical specialists (80.1%), GPs (14.6%) and social workers (7.3%). Other reported missing key actors are psychologists, physiotherapists, data managers, technicians and specialists in training (less than 5% each).



### 5.3.3.3 Organization of the last MDT meeting

Table 18 gives an overview of the practical organizational aspects of the last MDT meeting respondents had attended.

**Table 18 – Last MDT meeting: organizational features**

	n	%
<b>Frequency (N=1 012)</b>		
Twice per week, or more	28	2.8
Once per week	798	78.9
Once per fortnight but less than once per week	128	12.6
Once per month but less than once per fortnight	50	4.9
Between once every 2 months and once every 6 months	6	0.6
Once every 6 months or less	2	0.2
<b>Length (N=1 006)</b>		
Less than 60 minutes	363	36.1
60- <90 minutes	463	46.0
90-120 minutes	141	14.0
More than 2 hours	39	3.9
<b>Timing (N=1 012)</b>		
During lunch break	401	39.6
During regular working hours	383	37.8
Before or after working hours	228	22.5

	n	%
<b>Number of patients discussed (N=1 000)</b>		
<5 patients	29	2.9
5-10 patients	285	28.5
11-15 patients	345	34.5
16-20 patients	211	21.1
21-25 patients	69	6.9
>25 patients	61	6.1
<b>Time spent per patient (N=1001)</b>		
<5 minutes	151	15.1
5-10 minutes	746	74.5
11-30 minutes	101	10.1
31-50 minutes	2	0.2
>50 minutes	1	0.1

More than 80% of participants had a MDT meeting once a week or more. Eighty two percent of the participants estimated to have participate to MDT meeting lasting maximum 90 minutes whose 36% estimated this time to less than 60 minutes. Only 38% of participants have been enrolled in MDT meeting during working hours.

In 65% of the MDT meetings, not more than 15 patients are discussed during the meeting. There is no difference in the number of patients discussed in specific MDT meetings and in general MDT meetings, nor regarding the size of the hospital.



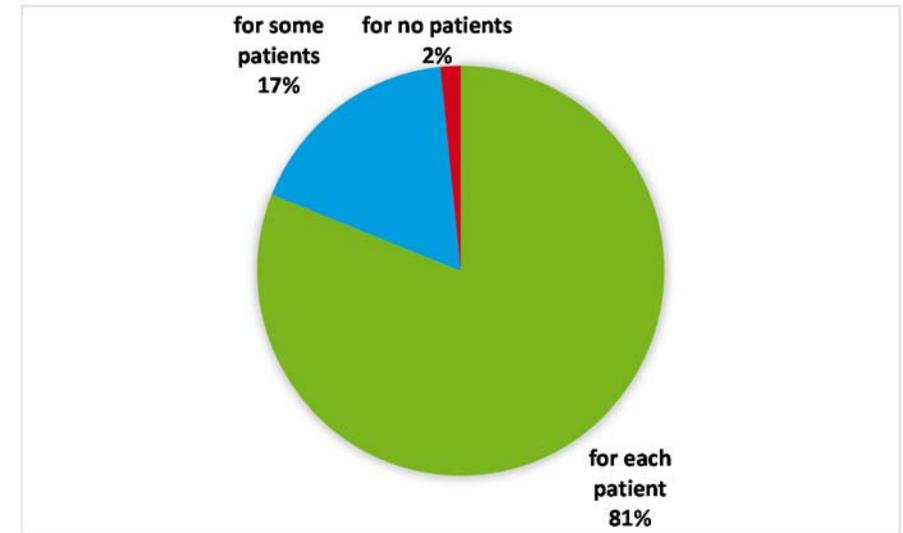
According to about three quarters of the respondents, each patient is discussed between 5 and 10 minutes on average (Table 18). According to 15% of the respondents the discussion lasted less than 5 minutes per patient. There is no difference according to the hospital size or the type of MDT meeting (specific or general). It should be noted however that the length of a discussion cannot be considered a valuable quality indicator.

A large majority of respondents (92.7%) reported that in their opinion, most patients with an invasive cancer are discussed in a MDT meeting.

#### 5.3.3.4 Clinical information available for the treatment

About 81% of the respondents reported that during the last MDT meeting they attended the clinical stage was clearly defined for each patient using a recognized classification (e.g. TNM, FIGO) (Figure 25). When the clinical stage was not defined, they justified it by the fact that the assessment of the patient was still ongoing (36.4%) or because the clinical stage was not applicable (20.3%). Other reasons counting for less than 10% of the cases related to the incompleteness of the medical file, because it was a follow-up MDT meeting, a relapse or progression of the cancer, because the clinical stage was implicit in the discussion or still has to be discussed. Poor functioning of the MDT meeting, perceived uselessness of the clinical staging as well as clinicians' lack of tradition to determine a clinical stage before initiating a treatment were also mentioned. According to the respondents, the clinical stage was sometimes simply impossible to classify.

Figure 25 – Clinical stage defined (N=975)

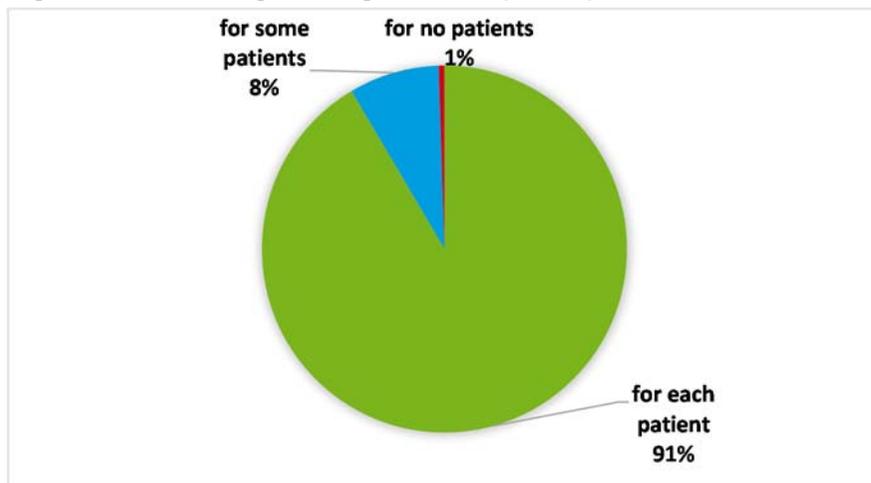


When the clinical stage was missing, discussion on the treatment was either postponed (31.7%) or was based on other criteria: clinical and prognostic (i.e. general status of the patient, comorbidities, surgery results) (21.8%), or on the pathological stage (21.1%). In less than 10% of the cases, treatment has been based on recommendations (oncological handbook or guidelines), physicians' opinion or on another international classification.

About 91% of the respondents reported that the pathological stage was defined for each patient discussed during the last MDT meeting they attended (Figure 26).



**Figure 26 – Pathological stage defined (N=978)**



When the pathological stage was not available (i.e. in 9% of the cases – see Figure 6) this was explained by the respondents because the assessment was still ongoing (37.0%), because the MDT meeting did not function well (22.2%), because a pathological stage was not applicable (16.7%). In some cases, it was reported that it was because the patients were discussed in the context of their follow-up MDT meeting, because pathological staging was considered unusual practice or because it was not reported in the medical file of the patient.

#### 5.3.3.5 Topics addressed during the last MDT meeting

The discussions in the MDT meeting covered several aspects. The discussion of the purely medical issues evidently occurred in 100% of the cases, but additionally the psycho-social situation of the patient was often debated. Dietary aspects were least frequently addressed (Table 19).

**Table 19 – Issues discussed during the last MDT meeting**

	n	% (N=1014)
Medical topics (diagnosis, therapeutic strategies)	1014	100.0
Psychological situation	807	79.6
Social situation	706	69.6
Patients' personal wishes	700	69.0
Financial situation	204	20.1
Dietary aspects	124	12.2
Other	16	1.6

*Note. Several answers possible*

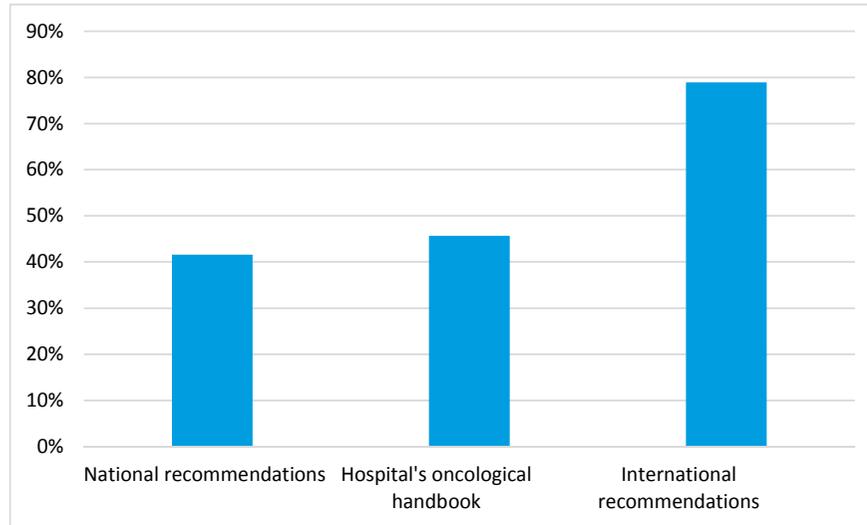
#### 5.3.3.6 The use of guidelines

A MDT meeting implies the use of guidelines to support the clinical decision. As shown in Figure 27, international guidelines were used in the MDT meetings attended by the majority of the respondents (71.1%); in about 40% of the cases, national recommendations and/or hospital's oncological handbook were also used to guide the management of the patient<sup>h</sup>.

<sup>h</sup> National recommendation might be based on international guidelines

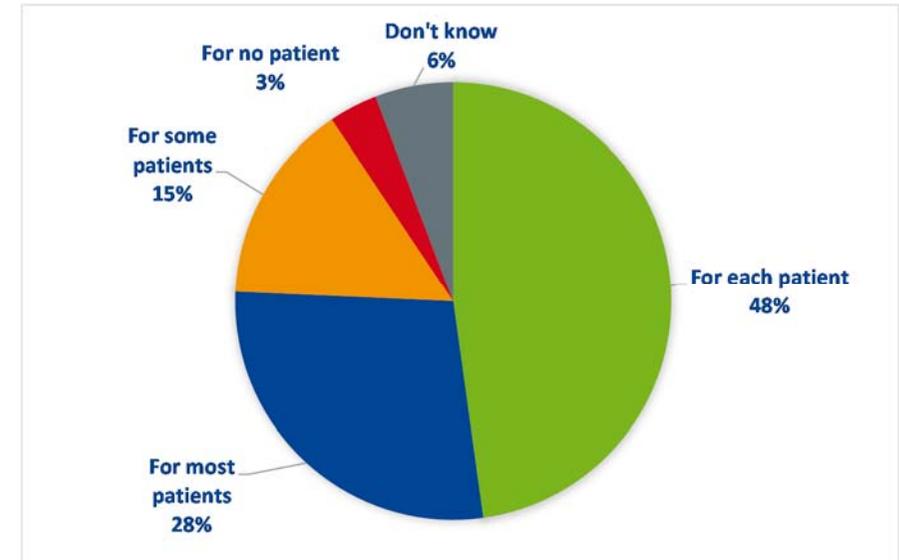


**Figure 27 – Recommendations used to guide the treatment strategy during the last MDT meeting (N=1 014)**



*Note. More than 1 answer possible*

**Figure 28 – The utility of the guidelines during the last MDT meeting according to physicians (N=839)**



Regarding the usefulness of the guidelines to orientate a treatment, 86% of the respondents reported that they were supportive (at least for some patients – possibly for every patient) for the discussions in the last MDT meeting they attended. When it was not so, around 50% of the participants to the survey justified it by the uncommon patient situation that does not answer to general recommendations, and 1 out of 4 participants considered the guidelines whether not recent enough whether not present for the particular case (Table 20).

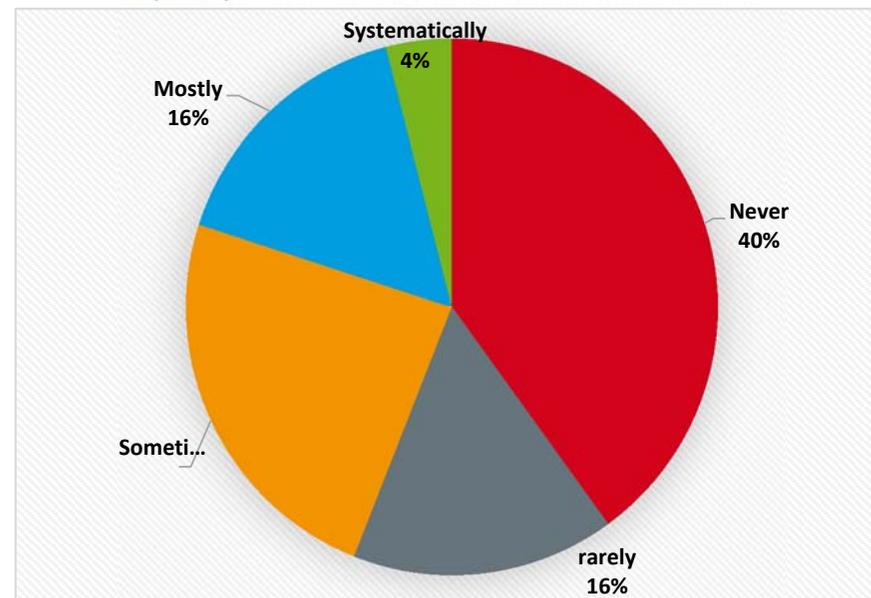


**Table 20 – Why were guidelines not useful for some patients during last MDT meeting - according to physicians**

	n	% (N=171)
The patient is a particular case, out of mean, complex	80	46.8
No recent recommendation or no recommendation at all for this cancer	37	21.6
The oncologist is specialist in his/her field and does not require guidelines. He/she knows what are the most appropriate treatments	20	11.7
Particular comorbidities not covered by the guidelines	17	9.9
Decisions are taken in the MDT meeting	8	4.7
Patient refusal to follow the recommended treatment / side effects	4	2.3
Opportunity to include the patient in a clinical study, out of recommendations	2	1.2
International recommendations do not suited to reimbursement rules in Belgium	2	1.2
Negative pathology	1	<0.1

Only a minority of the 25 data managers who participated in the survey reported that they check systematically if the treatment decisions followed the oncological handbook recommendations; a task which they officially have to fulfil. This is mainly due to the high administrative workload they experience.

**Figure 29 – Check of the adherence of the decision to the oncological handbook (N=25)**

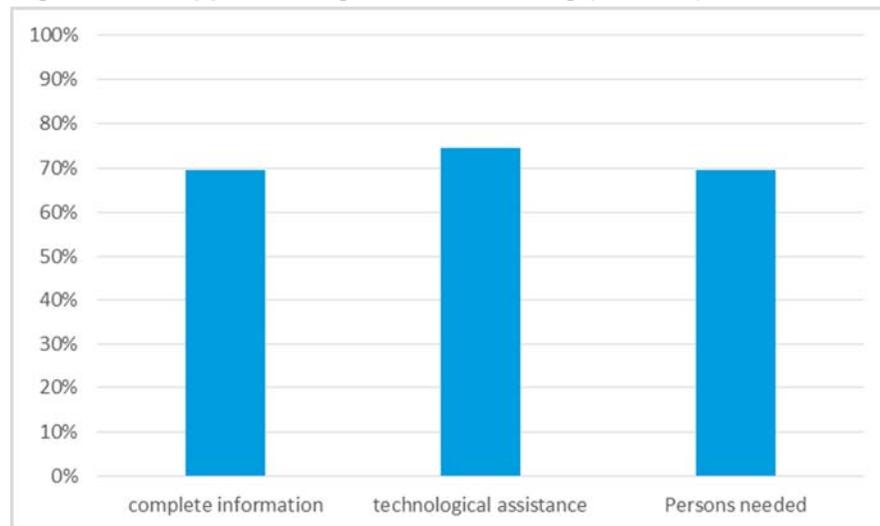


**5.3.3.7 Support during last MDT meeting**

Almost three-quarters of the respondents reported that the necessary “resources” (information on the patient, technological support, expertise support) were available for each patient at the MDT meeting.



**Figure 30 – Support during last MDT meeting (N=1 014)**



The next table describes the way information was made available to the MDT meeting participants during the last MDT meeting they attended.

**Table 21 – Availability of medical information during the last MDT meeting**

	n	% (N=1014)
<b>Medical file</b>		
Electronically available for someone in the room. and projected for the participants	693	68.3
Electronically available for everyone in the room	204	20.1
On paper	195	19.2
Electronically available for someone in the room	82	8.1

Other	15	1.5
Don't know	5	0.5
<b>Medical imaging</b>		
On a big screen so that everyone can see it	949	93.6
No medical imaging was shown during the meeting	34	3.4
On computer screen	34	3.4
Don't know	4	0.4
<b>Pathological results</b>		
The written report was presented (orally or projected)	766	75.5
The written report was available	299	29.5
The slices were projected	149	14.7
Virtual pathology images were accessed and projected	58	5.7
Other	23	2.3
Don't know	6	0.6
No results of pathology were discussed	2	0.2

*Note. Several answers possible*

In terms of technical resources, the medical file was made available for the participants as shown in Table 21, i.e. mainly by projection on a big screen. The medical imaging files were also most of the times projected. Finally, pathological results were directly communicated during the meeting (presented or projected).



Digital decision support tools (e.g. MATE, OncoDoc2, Adjuvant!) are barely (5%) used by the respondents; only few of them used it during their last MDT meeting. Besides, videoconferencing was a little more frequently used: 12.6% used it in their last MDT meeting, mainly to correspond with another hospital (9.2%) or with a GP (3.5%).

### 5.3.3.8 Turning MDT meeting decisions into action

#### Clinical pathways and responsibilities

For 97.5% of the respondents, the next steps in the clinical pathway were clear for all discussed patients. Moreover, 46.8% of the respondents confirmed that the name(s) of those responsible for the next step in the clinical pathway was (were) noted in the medical file of each patient, while 21.6% confirmed it was not.

#### Information to the patient

According to the CSO/onco-coaches and coordinators of MDT meeting, patients are in most cases (89%) informed by their treating specialist about the MDT meeting's results. Less frequently, the information is transmitted by the CSO/onco-coach or the GP (Table 22), rarely by the MDT meeting coordinator, the data manager or a secretary. Patients may also receive the information by letter or by a copy of the MDT meeting report.

**Table 22 – Who informed the patient of the MDT meeting decisions - according to CSO/onco-coaches and coordinators of MDT meeting (N=304)**

	N	%
<b>The treating specialist</b>	270	88.8
<b>The CSO / onco-coach</b>	49	16.1
<b>The GP</b>	22	7.2
<b>Don't know</b>	5	16.1
<b>Other</b>	8	2.6

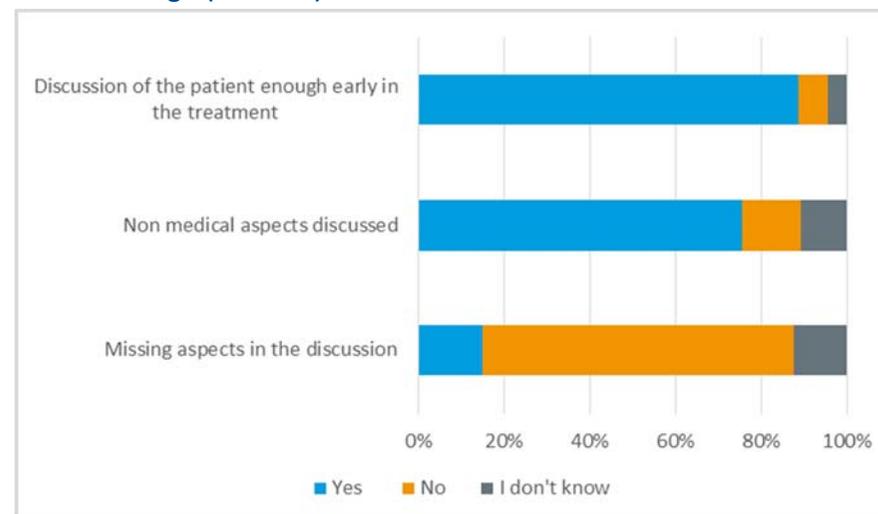
Note. Several answers possible

### 5.3.4 Perceptions on the MDT meetings' functioning

#### 5.3.4.1 Perceptions about the quality of the discussion

Several aspects of the discussion could be used as indicators of the quality of the MDT meeting. MDT meetings aim to discuss a patient as soon as possible in order to develop a treatment plan in a multidisciplinary way. From Figure 31, we see that the majority of the respondents agreed that the MDT meeting occurs early enough in the clinical pathway of the patients (88.8%), that non-medical aspects are also discussed during the MDT meeting (75.6%) and that all aspects seem to be covered during the MDT meeting (72.7%). In case of delay in discussing a patient during the MDT meeting, this was mostly due to the choice of the treating specialist, who preferred to discuss the patient after the first curative treatment (i.e. when their treatment is already launched or when they already have been operated) or due to the low frequency the MDT meetings are organised in certain hospitals.

**Figure 31 – Perception of several quality aspects of the discussion in MDT meetings (N=1 014)**



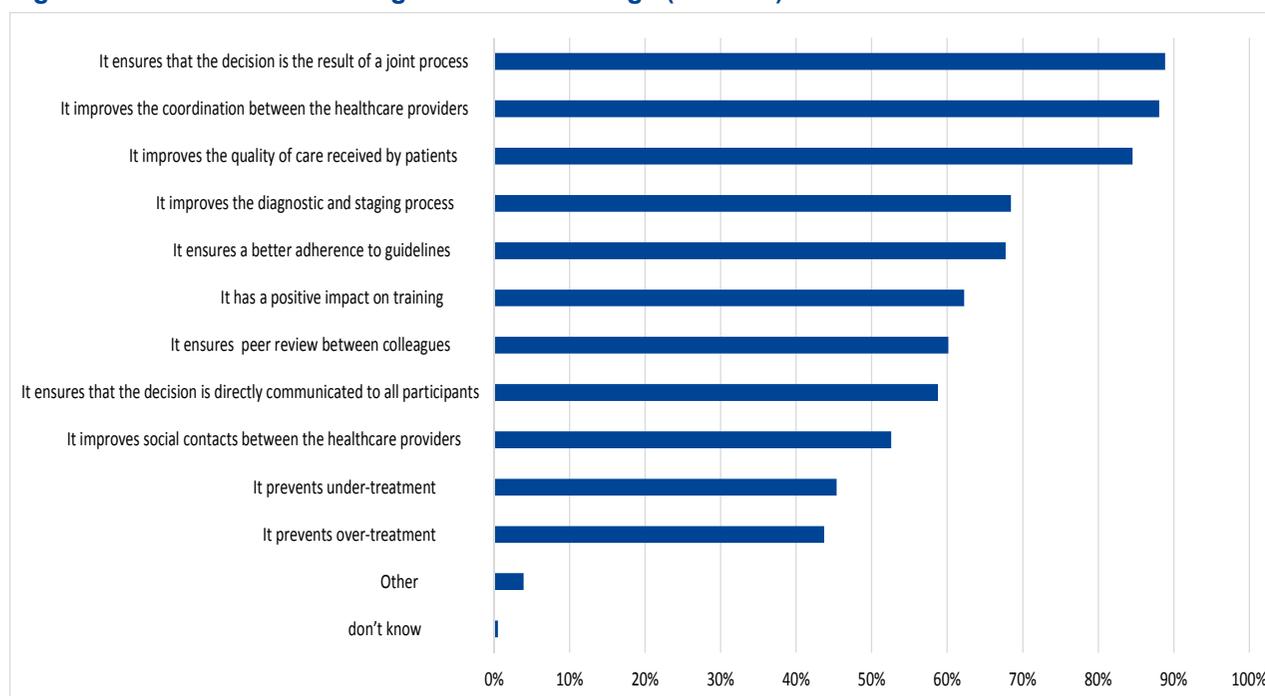


As presented in section 1.3.3.5, several aspects related to the patient (medical, psychological, social, financial...) or to the treatment are discussed in the MDT meeting. Nevertheless, as shown in Figure 31, 13.8% of the respondents think that non-medical aspects are not sufficiently addressed during the discussions and 15% believe that some aspects are still missing, i.e. psychosocial and/or socio-economic issues, images, GP or paramedic's advices and patients' desires. Respondents attribute this 'gap' mainly to the absence of key actors, shortness in time or the lack of a real discussion during the MDT meeting.

#### 5.3.4.2 Advantages of the MDT meeting

Many advantages were recognized by the respondents (Figure 32); they relate to quality of decision making, quality of care but also social contacts between healthcare providers and positive impact on the training process, positive impact on the diagnostic and staging process. Nearly 90% of the respondents agreed that the MDT meetings ensure joint decision, improve coordination between healthcare providers and improve also the quality of care offered to the patient. These advantages were also ranked as 3 first in terms of importance (see data in appendix D).

Figure 32 – Perceived advantages of MDT meetings (N=1 014)



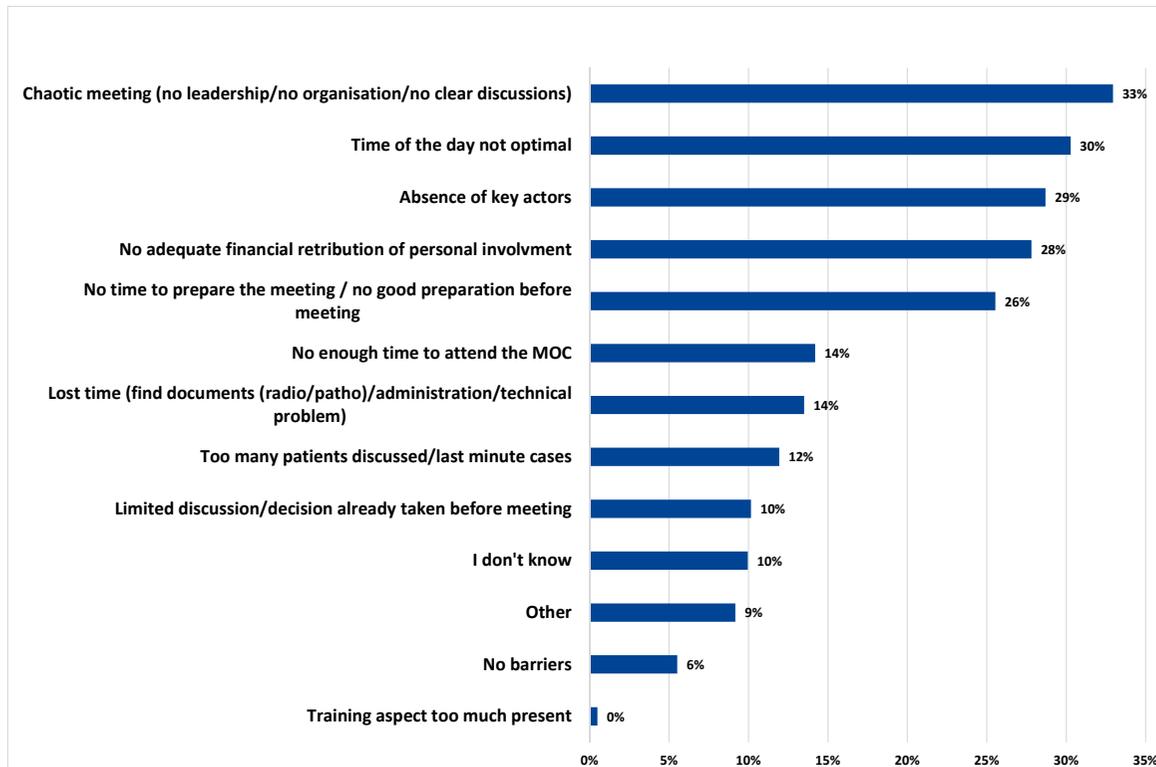
Note. Several answers possible



**5.3.4.3 Barriers to an efficient organization of the MDT meetings**

The reported barriers are mainly organizational: chaotic meetings, timing (of the MDT meeting during the day), number of patients discussed, absence of key actors, etc. Nevertheless, 6% of the respondents identified no barriers to an efficient MDT meeting and 10% did not know. The 3 most frequently reported barriers were also ranked first in terms of importance (see data in appendix D).

**Figure 33 – Barriers to an efficient MDT meeting (N=1 014)**



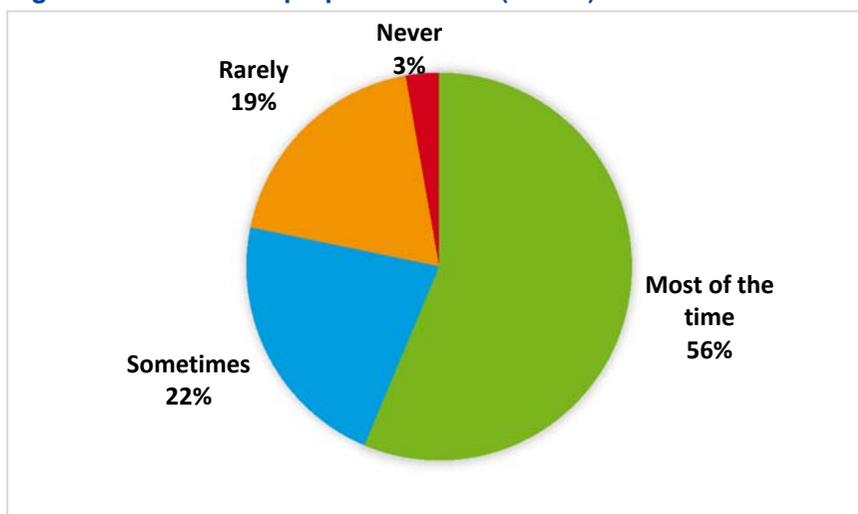
*Note. Several answers possible*



#### 5.3.4.4 Time to prepare MDT meetings

Figure 33 shows that 26% of the respondents consider a lack of time to prepare the MDT meeting as a barrier to an efficient MDT meeting. Yet, Figure 34 illustrates that one fifth of the respondents (22%) never or rarely have sufficient time to prepare the MDT meeting; 56% reported that they have most of the time sufficient time to be well prepared.

**Figure 34 – Sufficient preparation time (N=832)**



Note : N = 823, only for participants who have to prepare MDT meeting

#### 5.3.5 GP's implication in MDT meetings

##### 5.3.5.1 Invitation of the GPs

In order to increase the reliability of the information, we only consider the answers given by the onco-coaches/CSO's and MDT meeting coordinators as they are the ones involved in the organisational aspects of the MDT meetings. According to 46% of them, GPs are systematically invited to the MDT meeting where one of their patients is discussed. However, 13% does not know if the GP is systematically invited and another 22% reported that this is never the case (Figure 35).

**Figure 35 – Invitation of the GP to the MDT meeting (according to MDT meeting coordinators and CSO) (N=304)**

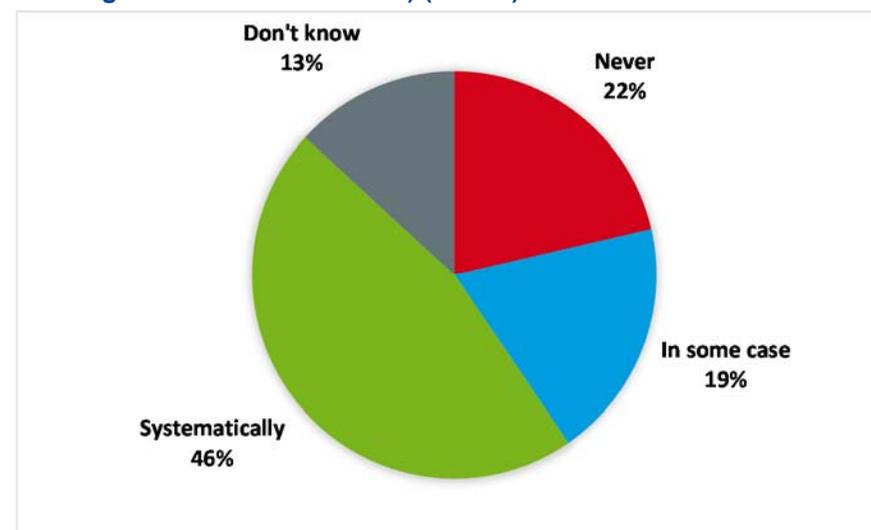


Table 23 shows that if the GP is not systematically invited, he is on his/her demand. The invitation is generally made by phone or by e-mail.



**Table 23 – Practical aspect of the GP's invitation according to CSO's/onco-coaches and MDT meeting coordinators (N=304)**

	n	%
<b>If the GP is not systematically invited, when exactly is he still invited? (N=51)</b>		
If the GP asks for it	20	39.2
Depending on the patient (complex, age, psycho-social aspects, etc.)	14	27.5
Depending on the specific MDT meeting	4	7.8
If the patient asks for it	1	2.0
Other	12	23.5
<b>How the GP is in general invited? (N=297)*</b>		
Telephone call	99	33.3
E-mail	81	27.3
Letter	74	24.9
Information in the patient's electronic file accessible by GP	37	12.5
SMS	2	0.7

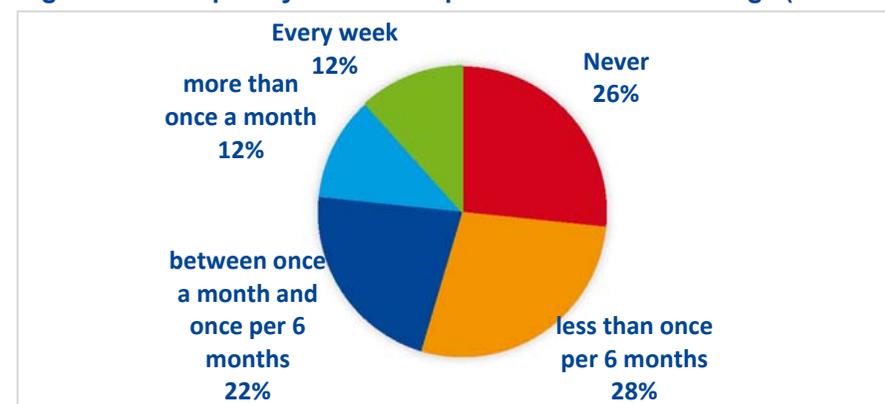
\*Several answers possible

On average, GPs are invited 4 days prior to the meeting, with a median of 3 days.

### 5.3.5.2 Participation of the GP

According to 23% of the respondents, a GP was present during (parts of) the last MDT meeting they attended (see Figure 24). More than 50% of the respondents reported that the GP is seldom or never present at the MDT meeting (Figure 36).

**Figure 36 – Frequency of the GP's presence in MDT meetings (N=1 014)**



### 5.3.5.3 Perceived contribution of the GPs in MDT meetings

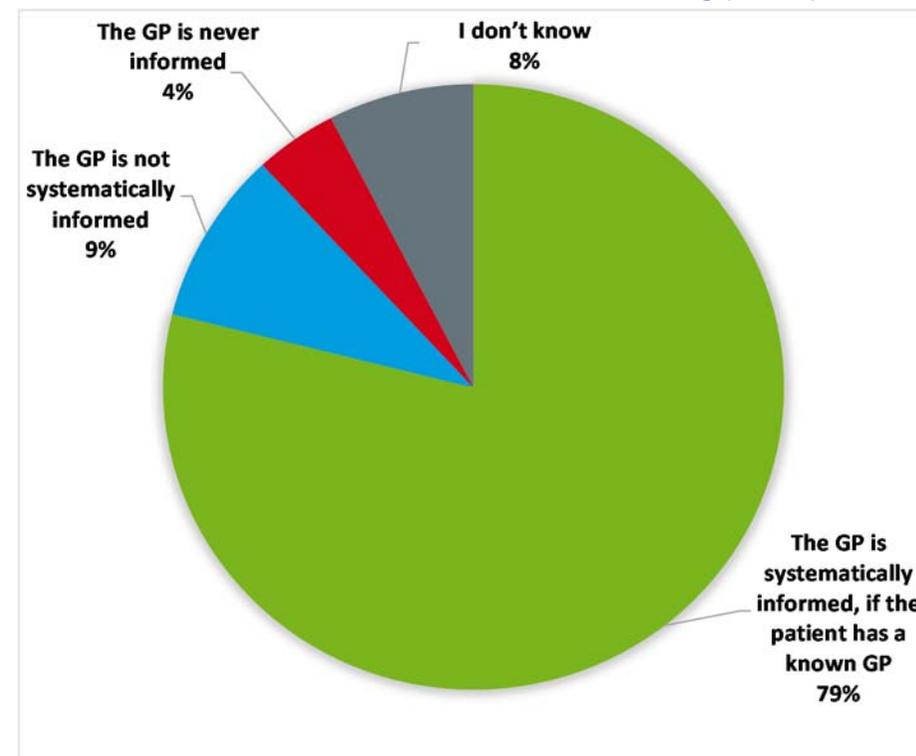
Table 24 focuses on the respondents who met a GP in the last MDT meeting they attended. There is no consensus on the added value of GPs' presence in the MDT meeting and this is not related to the professional profile of the respondents.

**Table 24 – Does the GP contribute to the discussion?**

	n	% (N=777)
Systematically	21	2.7
Mostly	80	10.3
Sometimes	209	26.9
Rarely	55	7.1
Never	329	42.3
Don't know	83	10.7

#### 5.3.5.4 Information of the result of the MDT meeting

In the large majority of the cases (Figure 37), the GP is systematically informed of the results of the MDT meeting, obviously if the patient has an entitled GP. Yet, this is not the case according to 13% of the respondents and another 8% do not know.

**Figure 37 – Information of the GP of MDT meeting results according to onco-coaches/CSO's and coordinators of MDT meeting (N=304)**

The GP is mainly informed of the results of the MDT meeting by a letter, and in a smaller percentage of cases by email and/or phone call. Some MDT meetings use electronic secured flows as Medibridge or the medical electronic file.



**Table 25 – How is the GP informed of the result of the MDT meeting according to CSO/onco-coach and coordinators**

	n	%
	(N=304)	
Letter	249	81.9
Electronically	12	3.9
E-mail	54	17.8
Don't know	2	<0.1
Telephone call	37	12.2

*Note. Several answers possible*

### 5.3.6 Administrative aspects of the MDT meetings

Questions on administrative issues were only presented to data managers, CSO's/onco-coaches and MDT meeting coordinators. Among them (N=329), 86 (26%) are involved in the billing to the sickness funds and 113 (34%) in the data transfer to the Belgian Cancer Registry.

Not every patient is billed to the sickness funds; the reasons for not doing so are, in descending order: (1) the patient was already billed for a previous MDT meeting occurring in the same or in another hospital, (2) the decision on treatment was postponed due to the need of additional exams, (3) non Belgian resident or no affiliation to a sickness fund, (4) the hospital is not the reference hospital mentioned in the MDT meeting report. Sometimes, a patient is discussed but after all no malignancy was diagnosed and hence the MDT meeting could not be billed.

It happens that data transmitted to the BCR are incomplete. This is mainly because data are missing in the MDT meeting report itself, but other reasons are also reported: sometimes some criteria are not applicable, the administrative overload, technical problems or a lack of training in encoding the data.

According to 36% of the CSO/onco-coaches and MDT meeting coordinators, the MDT meeting report is signed directly after the meeting. In the other cases, it is done within 2 weeks (median) following the MDT meeting.

### 5.3.7 General comments on the MDT meetings

The free comments reported by the respondents were summarized in three categories: positive comments, critics and suggestions. Even if a comment was only given once, it is reported, in order to give a complete view of the respondents' opinions.

#### 5.3.7.1 Positive comments on MDT meetings

Many people underlined their satisfaction with MDT meetings for:

- Quality of care
  - they are needed for a good practice in oncology,
  - increase the safety for the patient,
  - real progress in the treatment of the patient,
  - increase quality of care for the patient, e.g. by collecting information for the diagnosis, discussing complex cases, thoroughness in the management of the patients.
- Work process
  - increase multidisciplinary,
  - allow multidisciplinary decisions,
  - improve the quality of the relationship between healthcare providers,
  - allow that all healthcare providers provide the patient with the same information,
  - are time saving for the participants.
- Personal
  - are enriching.
- Societal
  - allow savings in healthcare expenditures (avoiding unnecessary exams and treatments).



### 5.3.7.2 *Negative comments on MDT meetings*

Respondents gave also their negative feelings they experienced on the MDT meetings.

#### **About the MDT meeting in general:**

- The MDT meeting reports are not adapted to hematological malignancies.
- Several MDT meeting participants could discuss the patient case directly with the treating physician, outside the MDT meeting and therefore should not have to attend the meeting (e.g. dieticians, social workers, etc.).
- MDT meetings do not bring added value in the treatment.
- Nutritional aspects are not systematically discussed.

#### **About financial aspects:**

- MDT meeting participants are not paid in proportion to the workload (preparation and attendance time).
- The billing by the 1<sup>st</sup> hospital hampers the remuneration of the contribution of the “expertise/university hospitals” consulted afterwards.
- MDT meetings are a way to finance oncologists.
- Discrepancies between remuneration of oncologists and surgeons are unfair.
- The reimbursement by the sickness funds are often delayed; sometimes up to 2 years after the billing.
- Currently no budget for material (screens, video-conference, etc.) is provided

#### **Critics on the meetings:**

- Absence of key actors in the meetings.
- Presence in the meetings of specialists without know-how in oncology or in some pathologies.
- The information and the discussion are not always of high quality.
- Lack of respect between physicians.

- Discussions are virtual, merely based on the patient’s file when participants have not seen the patient.

#### **About overload:**

- MDT meeting participation takes a lot of time: preparation, transport, outside working hours, many participants with only limited contributions . It is more and more difficult to conciliate clinical practice and administrative tasks.
- Administrative overload of the MDT meeting.
- Too many cases discussed in too short time.
- Lack of recognition of the coordinator’s workload by his/her chief as the MDT meeting coordination is not considered a clinical activity.
- Organized outside working hours

### 5.3.7.3 *Suggestions made by the respondents*

#### **MDT meeting in general:**

- Make MDT meeting mandatory for each new cancer.
- Abolish MDT meetings in small hospitals as there is no sufficient expertise and/or the frequency is too low for an efficient organisation of the treatment.

#### **Organization:**

- Every MDT meeting should be attended by at least 1 oncologist, 1 radiologist, 1 pathologist, 1 nuclear medicine specialist, 1 surgeon, 1 radiotherapist and 1 data manager
- Consultation with paramedics and social workers should happen outside the MDT meeting to limit the number of attendees. During a mandatory contact of the patient with the social service before the treatment starts, the psycho-socio-economic information can be collected while it saves the social worker the time of attending the MDT meeting. Patient’s cases should be presented in the MDT meeting by the treating specialist.
- Depending on the case discussed, key actors (e.g. the geriatric liaison nurse) should attend the MDT meeting.



- MDT meetings should follow a mandatory discussion scenario so that all aspects (e.g. also psychosocial) are discussed.
- Videoconferencing has to be encouraged for GPs and (external) (sub) specialists.
- In order to compensate the GP's difficulty of attending the meetings, a discussion between the GP and the treating specialist based on the MDT meeting proposal could be held afterwards.
- Discuss patients during a 'follow-up MDT meeting' where the results of the treatment (including death) can be discussed.
- Redefine the role of the data managers.

#### **Financing:**

Financing of the MDT meeting should be increased and/or reviewed in order to make it more adequate:

- Remunerate administrative work.
- Financing of the hospitals should be based on more recent activities.
- Increase the number of reimbursed disciplines: 3 treatment pillars (surgery, radiotherapy and systemic therapy) + 3 diagnostic disciplines (radiology, pathology and nuclear medicine) + for hematology, physician with cytogenetic and molecular competences.
- Remunerate videoconference.
- Revise and clarify the rules of the follow-up MDT meetings.
- Improve the inspection of what is done with the funds received within the frame of the cancer plan.
- Reimburse the review of scintigraphic data (including PET/CT).
- Reimburse the discussion of benign tumours.
- Separate sickness funds billing and data for Cancer Registry.

#### **MDT meeting report:**

- Create an online registration system with a standardized report so that the transfert of data to BCR and sickness funds can be improved.
- Adapt the questionnaire for each pathology, and in particular for hematology.
- Improve the form for the follow-up MDT meetings.
- Register the reason why the MDT meeting's decision was not applied.
- Control the MDT meeting report by the MDT meeting coordinator.
- Select the data that have to be registered in a better way.
- Make data available for benchmarking purposes.
- Belgian cancer registry should give feedback.

#### **Technological support:**

- Improve technological support (computer screens, videoconference, meeting rooms, ).
- Integrate pathologies' images.

## **5.4 Discussion**

### *5.4.1 Context and limitations*

The results of the online survey complement the administrative data on the organization of the MDT meetings which are described in the other chapters. Yet, they are descriptive and, generally speaking, do not necessarily appeal to very detailed comments or further reflection.

The response to the online survey can be called a success. In part, this can be explained by the health professionals' enthusiasm about the MDT meetings but also by the ease of access to the survey. The possibility to fill in the questionnaire in several steps, and the mandatory aspect of questions favoured the availability of a huge number of complete questionnaires. Nevertheless, it should be realised that not every hospital has participated, and within any hospital not every MDT meeting attendee. Also, the length of the questionnaire - targeted to health professionals who already have a very busy schedule - may have impaired a higher participation rate.

Questions were inspired by other, yet not validated, surveys published in the literature. The present questionnaire was not validated either, still it was



pretested by a small number of coordinators of care in oncology (CSO/onco-coaches). In addition, during two meetings (one in Dutch and one in French) the results were thoroughly discussed and some peculiar results were elucidated by the experts of the field. The fact that more than 80% of the respondents had at least one MDT meeting a week definitely adds to the reliability of the results.

In the next paragraphs, the following themes are discussed: organizational aspects of the MDT meeting, the MDT meeting as a place for training, billing of administrative aspects, the function of the data manager and the place of the GP. We will also discuss privacy issues and the possibility to use videoconference.

#### *5.4.2 Organizational aspects of the MDT meetings*

##### *5.4.2.1 The General and the specific MDT meeting*

MDT meetings are organised in two different settings: either as general meetings where all types of cancer are discussed, either as specific meetings where a specific cancer type is discussed. The first are organized in hospitals with low numbers of new cancer cases. The order the patients are discussed is such that specialists only attend those cases in which they are/will be involved/they have experience.

Sometimes it is very hard to find an expert with sufficient subspecialty for certain cancer types. In these cases videoconferencing could improve the attendance of those subspecialists.

##### *5.4.2.2 Attendance to the MDT meeting*

Among the ‘**missing specialties**’, radiologists are highly ranked. Nevertheless, their presence is crucial to assist in the interpretation of the imaging, certainly when there are discrepancies between the imaging and clinical data. Pathologists are also often missing, which is not surprising giving the lack of physicians specialized in this field and the fact that their presence is highly desirable in most MDT meetings (whereas e.g. a gynaecologist will only be invited for dedicated MDT meetings). In daily practice, pathologists often have to move for MDT meetings to another

hospital (site), which is also a waste in time. In some hospitals, they try to organize the MDT meetings in the pathology service in order to increase the attendance of pathologists. Here also, videoconferencing could offer a partial solution to this problem.

The following “minimal composition” for a MDT meeting was suggested: 1 specialist in imaging (subspecialized), 1 radiotherapist, 1 oncologist, 1 specialized surgeon and 1 pathologist. It is imperative that the referring or a treating specialist of the patient also attends the MDT meeting. This would, according to respondents, guarantee the quality of the MDT meeting discussion and decisions.

#### **Other professionals**

Whether social workers (and by extension also other para-medical specialties) should attend MDT meetings was a matter of debate. Some argued that they should not waste their time in MDT meetings and can be informed through other means, while other argued that if psychosocial aspects are taken in consideration, the treatment plan may look different.

In the meantime, the presence of psychologists is considered of added value, surely in case of mutilating interventions.

##### *5.4.2.3 Practical organization of the MDT meetings*

The results demonstrated that in many hospitals MDT meetings are organized outside regular working hours. As so many different disciplines are involved in the MDT meetings it may be impossible to find time that fits perfectly in everybody’s schedule. In addition, though the web survey as well as during the discussions afterwards, it was well brought to our attention that the preparatory efforts for an efficient MDT meeting should not be minimized. Yet, if attendees do not want to waste their (and others) valuable time it is extremely important that the meeting is well prepared, for instance that colleagues know well in advance which cases will be discussed, that imaged that were generated in another hospital(site) can be retrieved and interpreted in advance. A national or at least regional registry, like “Réseau Santé Walloni” may be very helpful in these cases.

---

<sup>i</sup> The “Walloon Health Network” allows a secured exchange of computerized medical documentation (test results, medical reports, letters, etc.) between the doctors treating a same patient.



### 5.4.3 *The MDT meeting as a fruitful place for training*

There was clear consensus on the training dimension of the MDT meetings, certainly not only for physicians in training and assistants but also for all other attendees, including practicing specialists. This aspect could be further improved when every case is also presented during follow-up.

### 5.4.4 *Billing problems*

Several problems related to the billing of MDT meetings were raised during the discussions. Firstly, the rules for billing follow-up MDT meetings are not clear at all. Moreover, they would like to be able to bill a systematic presentation of the patients after surgical resection to discuss the following steps of the treatment plan. Thirdly, it causes a lot of problems that, in order for the “second hospital” to receive reimbursement, the name of this hospital has to be mentioned in the MDT meeting report of the “first hospital”. Some patients who ask a second opinion do not inform the first hospital where they were diagnosed, hence nothing is stated on the MDT meeting report and the second opinion MDT meeting cannot be reimbursed. In other cases, even when a hospital wants to refer patients for a second opinion, they may do so without naming directly the hospital in their report, as there is no direct interest for them to do so. Also, some “smaller” hospitals have arrangements with bigger hospitals and refer the patient systematically to the latter, without giving the patients the possibility of being referred to the hospital of their choice.

Last, if it is decided in the MDT meeting not to treat the patient, no MDT meeting can be billed, while much time and efforts may have been spent to come to that conclusion. The same applies when a patient has simultaneously 2 tumours: for the second tumour, the MDT meeting cannot be billed.

In addition to these financial issues, the quality of the sickness funds’ process in all these was virulently deplored: lost documents, high number of refusals, length of the process, engender a lot of extra administrative workload. An electronic flow was claimed for.

Finally, it was questioned why the physical presence of someone is mandated in order to get reimbursement while a videoconference of good quality gives the same result. In some hospitals this has led to virtual “administrative MDT meetings” in order to get reimbursement for those colleagues who can only attend the “real” MDT meetings through videoconferencing.

### 5.4.5 *The function of data manager*

According to the law, a lot of administrative and even qualitative tasks have been transferred to the data managers. In reality, however, the data managers have far too much work to realize what is written in the law. In daily practice they (are asked to) focus on the administrative tasks, certainly because it has a major financial impact for the hospital (and the financing of their own job). Hence, the function of the data manager has to be redefined thoroughly.

Due to the enormous administrative workload and the high number of MDT meetings, the physical presence of the data manager in every MDT meeting is impossible.

The data manager has to have at least a master degree. Nevertheless, not every task, in particular the administrative part, needs to be done by someone with a university degree.

### 5.4.6 *GP at the MDT meetings*

In general, GP’s rarely attend MDT meetings; when they do, they go to MDT meetings organised in smaller hospitals close by. A couple of reasons were put forward for their low level of attendance: lack of invitation/information, too much time lost in relation to the length of the case discussion. Here, videoconferencing could also offer a solution. A pilot project to implement Telemoc with GPs, which was financed by the INAMI/RIZIV, was carried out from 2009 to October 2010.<sup>72</sup> Videoconference resulted in an increased participation of GPs, both in terms of the number of GPs attending the MDT meeting and the frequency of their participation. Users (GPs and MDT meeting participants) were very satisfied and it was noted that the implementation of Telemoc could be realized with negligible costs.



However, the presence of a GP in the MDT meeting is not considered valuable by all. The proponents explained that the GP brings another point of view on the patient, knowing him or her better than healthcare workers from the hospital, that he/she can forward the wishes of the patient and/or his family. The opponents argued that although a good GP – specialist relationship is important for the treatment, a GP is not necessarily present in the MDT meeting. Also, a GP's presence may be time consuming for the meeting: MDT meeting coordinator has first to explain the history, listen to the GP, and explain the proposed treatment

#### *5.4.7 Privacy*

While medical secrecy links the medical staff members of the hospital and the professional secrecy for the others, patients are not necessarily aware of the high number of people (and their qualification) who hear the discussion of their case. It may be good to inform him/her properly on the way such a meeting is organized. And, to increase the liability of the MDT meeting participants/spectators, a list of attendance could be signed.

#### *5.4.8 Utility of the handbook*

In nearly 80% of the last MDT meeting the respondents attended, international recommendations were followed. Apparently, the hospital oncology handbook is very important; it has a powerful unifying role. It allows the identification of strengths and weaknesses of the hospital in the treatment of cancers (could recommendations be followed in the hospital: do they have the expertise inside the institution?) and ensures a better homogeneity in the practices.

Once the (lack of) resources and weaknesses of the hospital are identified solutions could be explored, like developing collaboration with other reference centres or referring the patient, if the expertise is not present in the hospital.

#### *5.4.9 Videoconference*

As it was already mentioned several times, videoconference solves the problem of mobility between sites or between hospitals or for the GP. It allows to mobilize better expertise (for example in subspecialties or by consulting another MDT meeting), should reduce the shortage of participation of disciplines in penury (i.e. pathologists) and could favour the organization of more specific meetings.

Nevertheless, to be efficient, videoconference needs good technology support (including for the GP) and therefore a good financial support. Results from the pilot project 'Telemoc with GPs' could be useful to pursue reflection on such implementation.

Billing rules have to be reviewed if videoconference will be encouraged in order to increase attendance in MDT meeting.



## 6 WHAT IS THE CURRENT PERCEIVED ROLE OF GPs AT THE MDT MEETINGS? WHAT ARE THE GPs' EXPECTATIONS AND BARRIERS FOR THEIR ATTENDANCE AT THE MDT MEETINGS?

### 6.1 Introduction

Multidisciplinary team (MDT) meetings allow specialists from different disciplines to form the best possible team capable of achieving a shared goal of optimal care for a cancer patient. The purpose of the MDT meeting is to discuss the overall care of an individual within a planned meeting and to develop a strategic plan of diagnosis, treatment and follow-up.

With a 5-year cancer prevalence in the Belgian population of 1.7% (Belgian Cancer Registry, 2014) and the average size of a GP's practice population of 1 003 patients,<sup>73</sup> a GP may face an actual average amount of 17 cancer patients undergoing actual treatment or needing close monitoring in his/her daily practice.

At different moments of the disease trajectory, a MDT meeting is organized either at the hospital where the patient is treated, or at the hospital's reference centre. The MDT meeting's organizers can invite the GP, along with other medical specialists who can add value to the treatment discussion (e.g. an oncologist, radiotherapist, anatomic-pathologist, radiologist, surgeon, etc.). Numerous cases are often discussed within the same meeting. Participation requires physical attendance at the hospital, although videoconferencing also allows virtual GP attendance from within his/her own practice.

The legal framework of MDT meetings (Royal Decree 21/03/2003 & 18/08/2010) recognizes the importance of GP's participation with other specific medical specialties, although his/her participation is not compulsory. Participation is rewarded by financial incentives.

However, the participation of GPs in MDT meetings, according to the GP's nomenclature code for participation at MDT meetings, is currently minimal (around 3% for breast cancer patients in 2010, see chapter 3).

The legal framework of MDT meetings does not provide any task description for the GP during the MDT meeting or any stringent requirements for the MDT meeting's organisation and coordination in hospitals.

Along with the low attendance rate, the lack of legal task description may question the necessity of the GP's presence and of his/her role during the MDT meeting. However, based on the general description of the MDT meeting's content in the Royal Decree of August 2010, one could deduce parts of the role of a GP, as it is stated that psychological and social items have to be taken into account when discussing treatment plans. Variations in the GP's attendance rate by hospital (see chapter 4) suggest that contextual factors are important.

This research aims to answer 3 questions:

1. What are the current experiences and the perceived roles of GPs towards the MDT meeting?
2. What are the barriers perceived by GPs towards their participation to the MDT meeting?
3. What are the preferences and expectations towards effective contribution during the MDT meeting?

### 6.2 Methods

To answer the research questions, a qualitative research methodology was chosen. Qualitative research aims to understand the lived experiences of people and can add meaning to numbers resulting from quantitative research.

To elicit participants' personal experiences and preferences, semi-structured interviews are an appropriate method. Interviews may be preferred over focus group discussions when personal or sensitive issues are at stake. Exploring personal barriers may best be done by interviews.



## 6.2.1 Sample

### 6.2.1.1 Criteria of inclusion

Aiming to explore the GPs' MDT meeting experiences, we selected GPs who had already participated in MDT meeting. Including GPs who had never participated in a MDT meeting might give additional information on barriers for attendance. However, they would not be able to respond to research question 1 and 2, therefore we chose only to include GPs with MDT meeting experience. A separate interview-study investigating the views of GPs without MDT meeting experience might complement this study.

According to the philosophy of a qualitative approach, we built a sample with maximum diversity, not aiming at statistical representativeness of GPs.

Diversity was based on:

- Language:
  - French- and Dutch-speaking: In order to achieve an equally compounded sample of interviewees, half of the GPs were recruited in the Dutch speaking part of Belgium and half in the French speaking part of Belgium.
- Regions and density of hospitals organising MDT meetings:
  - Based on the FPS webpage "Care institutions"/Hospitals,<sup>j</sup> 4 areas in different provinces in each part of the country were chosen according to:
    - High-density areas: Gent, Roeselare, Liège, Charleroi
    - Low-density areas: Lier, Tienen, Libramont, ChimayGPs in high-density areas may have experience in different hospitals and are therefore able to compare the different experience. GPs in low-density areas only have experience in one hospital and may formulate their lived experience in a different way.
- Age (no strict categorisation has been used but younger and older GPs are included), gender and practice organisation (solo/duo/group practice). GPs working in group practices may have different

opportunities for MDT meeting participation and may also have different experiences in discussing shared patients than solo working GPs.

### 6.2.1.2 Sampling procedure

GP's were recruited in the vicinity of hospitals offering an oncological care program. Within the eight areas selected, representatives of the local GP circles and of GLEM/LOKs (French/Dutch: Groupes Locaux d'Evaluation Médicale/Lokale kwaliteitskringen) were contacted by telephone, asked about their MDT meeting experience during the last 5 years and their willingness to be interviewed. Through these contacts, snowball sampling of other GPs was done. For each of the eight areas, 2 GPs were selected according to the inclusion criteria.

Initially 16 interviews were planned but further sampling would have been organised when data saturation during analysis had not been reached.

### 6.2.2 Ethical approval

Ethical approval was obtained from the Comité d'Ethique Hospitalo-Facultaire Universitaire of Liège and the central ethical committee of the University Hospital Ghent (No. B670201421076).

### 6.2.3 Data collection tool

The basis for the interview guide was delivered by the KCE in French, translated into Dutch and adapted by the subcontracting research teams (UGent and ULg) after discussion.

The main themes comprise: GPs' experience with MDT meetings; their perceived role towards the MDT meeting; and their perceived barriers and facilitators to participating. Each research team performed a pilot test of the interview guide in their native language by interviewing one participant. After this, the interview guide was adapted and finalised for use.

The interview guide is presented in appendix E.

j

<http://health.belgium.be/eportal/Healthcare/Healthcarefacilities/#.U43RBWenGg>



#### 6.2.4 *Data collection process*

The interviews were conducted at the interviewee's location of choice (in all cases this was the GP's practice). Informed consent was obtained before starting the interview. All interviews were audio-recorded and transcribed verbatim.

#### 6.2.5 *Analysis*

Analysis was done using Nvivo 10 software. A first thematic scheme was built based on the interview guide and the discussion of the first interviews' analysis by both research teams. Subsequently every interview was coded by two researchers independently and discussed two by two (within the same research team). Refining of the code book was done during further analysis and regular discussions between both research teams. To cross-check the coding results Skype discussions were held between researchers of both research teams. Additionally, the main findings and results were discussed during meetings between both research teams.

### 6.3 Findings

#### 6.3.1 *Sample description*

Sixteen GPs were interviewed, of whom 6 are female. The mean age is 48.75 years (range 29–67 years old). 5 GPs are working solo and 4 as a duo. The remaining 7 GPs work in group practices; 3 of them work in a mono-disciplinary and 4 in a multi-disciplinary practice. Three of these multi-disciplinary group practices have a capitated payment system.

**Table 26 – Participants of the interview study**

Participant	Language	M/F	Age	Practice	Payment Capitation/Fee-for- service (FFS)	model:	N hospitals where GP participated in MDT meeting
GP 1	Dutch	F	55	Group – mono disciplinary	FFS		3
GP 2	Dutch	M	42	Group – multi-disciplinary	FFS		3
GP 3	Dutch	F	29	Duo	FFS		3
GP 4	Dutch	M	38	Solo	FFS		4
GP 5	Dutch	F	61	Duo	FFS		1
GP 6	Dutch	M	58	Solo	FFS		1
GP 7	Dutch	M	63	Solo	FFS		1
GP 8	Dutch	M	47	Group – mono disciplinary	FFS		1
GP 9	French	F	56	Duo	FFS		4
GP 10	French	F	38	Solo	FFS		1
GP 11	French	M	37	Group – multi-disciplinary	Capitation		2
GP 12	French	M	39	Solo	FFS		3
GP 13	French	M	67	Group – multi-disciplinary	Capitation		2
GP 14	French	F	48	Duo	FFS		1
GP 15	French	M	62	Group – mono disciplinary	FFS		3
GP 16	French	M	40	Group – multi-disciplinary	Capitation		4



### 6.3.2 Results

#### 6.3.2.1 How do the GPs perceive their role in the MDT meeting?

The GPs have 3 perspectives when talking about their role:

- GP's own view on his/her tasks;
- GP's perception of patients' expectations towards him/her;
- GP's perception of specialists' expectations.

In general, the GP's perception of others' expectations of him/her serve to build his/her own task and role description. As such, the results will be presented from the GP's standpoint towards his/her role in the MDT meeting. Where his/her perceived expectations from others differ from his/her personal view, these will be highlighted.

GPs in our study have a clear opinion about their role in the MDT meeting, based upon their position and role in health care in general. However, performing according to this opinion is dependent on multiple factors which will be described as barriers and facilitators.

#### GPs have a unique position in healthcare

Patients and GPs share a *history of longitudinal care* resulting in a repertoire of knowledge managed by the GP. This repertoire contains medical facts (e.g. previous diseases, medication regimens), social facts (e.g. a family's cohesion, the home care situation), as well as personal facts (e.g. a patient's way of coping with misfortune, a patient's wishes and values towards life).

*'Donc il peut y avoir des éléments nouveaux entretemps qui peuvent intervenir, et là je me rends compte dans les réunions pluridisciplinaires, ils n'ont pas toujours toutes ces informations-là que nous on a en longitudinal puisqu'on voit les gens depuis longtemps, et puis il y a aussi notre connaissance des éléments non médicaux qui peuvent parfois être intéressants.'*

(GP 15: M, 62y)

As a result, GPs declare to be the caregiver par excellence because of their *access to this kind of relevant information* which may have an impact on treatment option choice.

*'Ah mais je trouve ça important parce qu'il y a des éléments qu'ils ne connaissent pas, parce que, quand on doit adhérer à un traitement aussi lourd que des rayons ou une opération qui peut être délabrante, je crois que, vraiment bien connaître son patient et le suivre depuis longtemps, c'est quelque chose qui peut vous faire sentir si le patient va adhérer ou pas.'*

(GP 14: F 48y)

Most of the information uniquely known by the GP concerns non-medical information such as: specific demands; attitudes towards futile medical care; specific home care conditions; presence of informal caregivers; financial aspects; and family and patient concerns. These are aspects which may alter the decision process during the MDT meeting.

*'(...) surtout si c'est un traitement qui va être lourd pour quelqu'un dont l'état et/ou l'âge peuvent causer problème, donc pour voir aussi quelle est un peu l'attente de la personne par rapport à ça, et ce que nous on en connaît, voir s'il y a d'autres indications, d'autres éléments que nous on ne connaît pas, et alors quand même les éléments non médicaux c'est quand même pas si rare que ça, ou les conditions de vie. Bon y a des personnes pour lesquelles il vaut mieux les garder à l'hôpital pour certains types de soins ou de traitements parce qu'à la maison ça n'est pas gérable, ou si c'est pour les ramener à la maison et ils n'ont pas des conditions de vie, il y a pas moyen de mettre un lit convenable ou...'*

(GP 15: M, 62y)

The way GPs take all the available (medical and non-medical) information into account during a patient's assessment is a feature of holistic care. According to our study participants, this attitude towards holistic care is characteristic of GPs. Therefore their presence during the MDT meeting is desirable.

The patient's and family's personal preferences are often *implicitly deduced from the shared history* by the GP if there is no official declaration or written statement from the patient.

*'de context, de sociale context, de familiale context, de individuele context van de patiënt, de levensgeschiedenis dat ge meegemaakt hebt met die patiënt. Ook hoe de thuisomgeving is, heeft die veel*



*mantelzorg, heeft hij niet veel mantelzorg? Heeft hij veel familie, heeft hij niet veel familie? De context van de familie – want dat is vaak ook een belangrijk punt. Soms wil de familie dat er niets meer gedaan wordt wat de patiënt wil of omgekeerd . allee. Er is zo een hele boel zaken die ge niet direct op papier hebt maar die gij wel kent door de geschiedenis van de patiënt te kennen en de omgeving van de patiënt te kennen.'*

*(GP 6: M, 58y)*

Consequently, GPs describe themselves as *representatives, spokesmen, confidants or defenders* of the patient.

*'dat betekent voor mij een moment waarop dat ik de specialisten kan zien die een patiënt een kort of lange tijd zien gaan opvolgen en waar ik vind dat ik op dat moment als huisarts misschien ook de stem van de patiënt kan vertegenwoordigen, in zaken van: ik wil wel of niet een bepaald beleid mee volgen, ik wil niet of wel chemo ondergaan, mijn houding, ik heb een euthanasieverklaring vroeger al, gelieve daar rekening mee te houden. Ik vind dat dat het moment is waarop dat je als huisarts een inbreng kunt hebben.'*

*(GP 1: F, 55y)*

*'Alors c'est peut-être pas très objectif, ni très scientifique, mais je pense le contact privilégié que le patient nous donne. Donc, certains sont fort dépendants et ont vraiment besoin que vous les portiez jusqu'au bout et d'autres vraiment ne vous donnent pas ce rôle d'acteur.'*

*(GP 10: F, 38y)*

During the curative phase of a cancer patient's disease, however, some patients may have more frequent contact with the specialist than with the GP. Consequently, specialists often have abundant actual and up-to-date information on the patient's clinical situation as well as on the patient's view towards the disease and its treatment. Specialists therefore can have a broader view of the patient's situation than just the specific focus of their specialty. Nevertheless, this will never match the GP's holistic view resulting from a longstanding relationship with the patient.

*'ja, vertegenwoordiging van de patiënt en zijn omgeving, omdat ge als huisarts toch wel dichterbij de thuissituatie staat. Omdat ge ze meestal toch goed kent, maar in mijn geval is dat ook maar beperkt he. Mijn collega kent ze dikwijls al van bij de geboorte, dat is nog anders dan van mij he? Maar ja, zo een beetje de thuissituatie, naar haalbaarheid thuis, wat willen ze, wat willen ze niet? De spreekbuis zijn van de patiënt.*

*I: de spreekbuis zijn van de patiënt.*

*L: de specialisten, en zeker na verloop van tijd ook heel goed contact he met de patiënt. Maar er is toch wel een verschil als ge de thuissituatie kent gewoon bij iemand ne keer in de living gaan zitten en ne keer kijken: er is al een heel ander beeld dan dat hij voor u zit op consultatie.'*

*(GP 3: F, 29y)*

Something that is distinctive for the intense personal relationship between the GP and the patient is the fact that, according to our study participants, the patient considers the GP's participation in the MDT meeting as a reassurance of good care (and sometimes makes an explicit demand to participate towards the GP). This results in a sense of *moral responsibility for the GP* to participate.

*'Het euhm, ja, patiënten hebben ook wel graag, (lacht), da ge daar zijt. Als ze weten da ge daar geweest zijt, dat geeft hen, ja, "mijne huisdokter was daar ook", eh, eh, als ge kunt zeggen we hebben met z'n allen samen gezeten en we hebben het besproken, en, dat is iets dat wel euh, denk ik dat patiënten graag hebben. Geeft vertrouwen.'*

*(GP 8: M, 47y)*

To guarantee continuity of care, which is a main task for GPs, GPs need detailed and timely information (which is not the case when GPs wait for the written MDT meeting report) to ensure the adequate and comprehensive organisation of care at home: technical aspects about treatments (e.g. stoma care, perfusion); practical aspects to respond to patient disabilities (e.g. home care nurses, administrative aspects concerning palliative care); and finally some treatment side effects which can be prevented, recognised, and better managed if known beforehand. The written MDT meeting report



does not provide the detailed and timely information required to organise good care, and therefore GPs are urged to attend the MDT meeting.

*'Moi je suis là pour m'informer de l'ordre des choses et des délais et voir quelles sont les infos que je peux donner au patient pour le soutenir, pour assurer sa prise en charge entre le domicile et l'hôpital et puis après l'hôpital le retour à la maison. Dans quel état va-t-il rentrer, aura-t-il besoin de soins ? Kinés, infirmiers, psychologue, assistant social, des repas ou pas ? Donc voilà.'*

(GP 11: M, 37y)

*'k Ben beter geïnformeerd. Alhoewel dat wij, ge kunt natuurlijk uzelf informeren. Ge krijgt dan wel nen brief maar ge krijgt ook natuurlijk de radiologies van het ziekenhuis waar da ge dan ook al wel is ziet, en zo, maar toch wel euh ja, dat vind ik wel, da ge daar toch wel wat meer. Ge volgt uw patiënt beter op |- Ja <l> -| en ge kunt euh, ja, in de opvolging achteraf ook beter, volgen, als ge daar bij participeert, ja. Naar, vooral naar het praktische toe. Naar diagnose, planning, euh ja, dat vind ik wel.'*

(GP 7: M, 63y)

### **Influencing factors for the GPs' roles and unique position in the MDT meeting process**

The GPs' tasks and roles in the MDT meeting process are not predefined – rather they are variable and changing, depending on many different influencing factors.

#### The complexity of the patient's case

GPs mention a varying personal need to participate in the MDT meeting according to *the complexity of the patient's case*.

Complex medical situations (e.g. multi-morbidity and extensive medical history, but also the complexity of the current disease status, treatment failure or deteriorating functional status) and complex home care situations (e.g. absence of family support, problematic financial status) prompt the GP to attend the MDT meeting and to participate in the deliberation process. The main reason for this effect is the direct and practical impact of the MDT

meeting conclusions on the GP's work and practice, such as preparing the organisation of home care for the patient (in the case of home care complexity) or acquiring new medical knowledge (in the case of medical complexity).

*'Ik ga mij bv wel voor een MOC verplaatsen als ik ja, weet van: het is een complex probleem he. Een jonge vrouw met een borstkanker die kinderen heeft die weet ik veel wat, waarvan ik verwacht: er gaat hier, er gaan een hoop zaken op ons afkomen waarmee het belangrijk is dat de communicatie met de specialist goed afgelijnd is. Ja, dan doet ge dan wat extra moeite voor.'*

(GP 2: M, 42y)

*'Alors là vous, ... peut-être égoïstement, j'estime qu'il n'y a pas de points d'interrogations, pas de zones d'ombres, qu'il n'a pas réellement besoin que j'intervienne, je n'y vais pas parce que je pense qu'il n'y a pas d'éléments à apporter. Et pour être juste un acteur présent physiquement mais n'apporter aucune information, ben, je ne vois pas la nécessité. Je ne vois pas la nécessité de ma présence. Voilà'*

(GP 10: F, 38y)

The added value of discussion and reaching consensus during the MDT meeting compared with the one-way communication of referral letters equally promotes GPs' participation.

*'En dan zeggen: kijk, voilà dat zijn de resultaten van de anapat. Dat is die soort kanker. Voor die soort kankers zijn dat de mogelijke behandelingen. En dan zei die bv: het is voor een oude dame zoals jullie zien, goed in de 80 maar zeer kranig. Die willen we nog een kans geven. We zullen nog gaan voor de maximale behandeling. Zijn jullie daarmee akkoord? Ik was daarmee akkoord, ik had het ook met de familie besproken op voorhand die er geweest waren. Ik zeg: ja, oke, iedereen staat op dezelfde lijn, dus we gaan ervoor gaan. En dan is inderdaad die behandeling gestart, relatief snel. Dat is ook het voordeel, iedereen is daar op dat moment. De radiotherapeut kan zeggen: oke, ik zal de patiënt oppikken, ik zal de patiënt opbellen, ik ga zeggen wanneer dat gaat gebeuren. Die zegt dat dan aan mij wanneer dat gaat gebeuren. Ik kan dan met de familie communiceren. Ziet ge, dat gaat*



*allemaal op 10 minuten hebt ge al uw afspraken bijna gemaakt, dat is formidabel he. Anders duurt dat dagen, soms weken.'*

*(GP 6: M, 58y)*

*'On n'est plus dans l'aspect purement thérapeutique pur et dur, la chimio et tous ces trucs-là, on essaie vraiment d'englober des notions...on a aussi un cancer chez une personne, et comment est cette personne, notamment vu son âge, est-ce que c'est raisonnable de se lancer dans telle et telle chose. C'est des choses qui sont de plus en plus prises en compte.'*

*(GP 15: M, 62y)*

Other patient-related variables may determine the relevance of the GP's input during the MDT meeting, but they do not alter the GP's readiness to participate.

Considering the diagnosis (cancer type), no distinction was made as to the GP's interest in participating in the MDT meeting.

*'ik ga er altijd naartoe. Zowiezo.*

*I: als ge uitgenodigd wordt?*

*L: ahjaja, als er een MOC. Ook al is het zo gemakkelijker, ge weet dat niet uiteindelijk he. Misschien zijn er problemen die zij zien dat gij niet ziet. Dat ge zegt: oh, daar had ik misschien niet aan gedacht. Maar nee, alle typen. Ik zeg niet direct voor één type zou ik niet gaan. Ik zou niet weten waarom ik niet zou gaan. Ik ga het zo zeggen.'*

*(GP 6: M, 58y)*

#### Interaction with other MDT meeting participants

The *interaction with other MDT meeting participants* during the meeting influences the GP's perception of his/her tasks and role and thereby modifies his/her readiness and conviction to participate in the future.

This interaction influences the quality of the interpersonal and interprofessional relationships.

*'Mais donc là, effectivement, il y a eu une impression de collaboration, et d'ailleurs ça m'a marqué parce que j'ai ouvert le courrier ce matin, concernant cette dame-là qui malheureusement est décédée, et le spécialiste dans son rapport dit : « le médecin traitant est passé, ça a été discuté avec lui et autres », même dans le courrier transparait cette interaction qu'il y a eu avec moi. Je me dis qu'effectivement ça a dû les marquer.'*

*(GP 16: M, 40y)*

Participating GPs *feel welcomed* at the MDT meeting by the other team members. Most of the time, they experience their participation being appreciated and their *contribution being respected*. The reciprocal interprofessional appreciation (GPs equally value the contribution of the specialists) creates a feeling of *being part of a team*. The sense of being part of a team facilitates an active involvement from the GP during the MDT meeting. If specialists take no account of their contribution during the decision process, however, GPs will feel disrespected. If GPs feel valued by the specialists for bringing in their expertise, it will improve their involvement. Nevertheless, there is a range of GPs: some don't feel inhibited to contribute while others do not feel at ease during the MDT meeting and would rather prefer contact by telephone.

*'Je hebt het gevoel dat er in de perifere ziekenhuizen dat je daar meer een deel van dat team zijt. Dat motiveert u om te gaan, het is een vicieuze cirkel. Daardoor kennen ze u ook beter, daardoor, terwijl in een groot Universitair Ziekenhuis geraakt ge daar niet voorbij voor bij die drempel.*

*I: als ge zegt: ik heb meer het gevoel van een deel van een team te zijn, op welke manier is dat dan?*

*B: ho, dat is op communicatievlak he. Daar wordt er gewoon allee , een deel van de informatie op huisarts niveau doorgespeeld naar ons en wordt daar ook een soort taakverdeling in toegewezen van ja, wie gaat welk stuk van de verzorging doen? Of van, terwijl in die grote centra, men organiseert daar alles. In feite, een oncologische patiënt die naar een Universitair centrum gaat, die heeft geen huisarts nodig he.'*

*(GP 2: M, 42y)*



Considering interpersonal contacts, GPs from our study emphasise the importance of good relationships with their colleagues and stated that meeting specialists facilitates future contact (direct contact, or by phone or mail). Personally knowing your interlocutor helps to overcome some difficulties (e.g. traditional interprofessional hierarchy) between GPs and specialists that could otherwise impair the working relationships.

*'De se sentir impliqué dans une équipe, de faire connaissance avec des spécialistes dont on ne voit jamais que la signature, oui c'est important. Et pour autant que la communication se passe bien, de pouvoir plus facilement après demander un complément par téléphone, ou... C'est important que le spécialiste me connaisse et que moi je connaisse le spécialiste.'*

(GP 13: M, 67y)

#### Task agreements between the GP and the medical specialists

The agreements on sharing tasks, made during the MDT meeting, influence the uptake of the GP's role.

As described, GPs' view of their role in the MDT meeting is largely based upon their specific relationship with the patient, their holistic view towards patient care and their perceived responsibility towards continuity of care. The opportunity and affordance to play this role, however, depend on task agreements between the GP and the medical specialists during the MDT meeting process. These agreements are not uniform, stable or 'contractual' agreements but are to be negotiated for every situation and for every patient individually. These negotiations depend on the concrete working procedures of the MDT meeting and lead to agreements on communicating decisions to the patient:

- The concrete working procedures of the MDT meeting

The concrete working procedures during the MDT meeting account for the level of involvement afforded to the GP. In general, the patient's case is presented by the main specialist in charge of the patient. Thereafter, other disciplines, including the GP, bring in additional information and finally there is a discussion to deliberate treatment plans. Depending on the MDT meeting coordination, the level of GP involvement varies between GPs who

simply receive the right to speak, through GPs who are asked specific questions, to GPs who play a full part in the discussion.

*'Het is de behandelende specialist die overloopt wat het laatste verslag is. De beeldvorming wordt daar bij gehaald. Dan wordt de mening gevraagd van de andere collega's die er zijn, de oncoloog, de radiotherapeut. Dat hangt ervan af. Maar het is altijd de eerste behandelende specialist die aan de hand van beeldvorming de casus een beetje schetst voor iedereen eigenlijk.'*

(GP 3: F, 29y)

*'Ils ne posent pas de questions. Ils me donnent la parole. Voilà. Est-ce que tu as quelque chose à apporter au dossier dont tu es au courant ? Tu vois comment ça va se passer ? Est-ce que tu veux intervenir ? Est-ce que tu as quelque chose à exposer ? Et puis ben du coup, comme ils voient que je suis là, ben oui j'ai quelque chose à apporter. Ben oui, je leur ai mentionné tel ou tel problème.'*

(GP 10: F, 38y)

On the one hand, GPs in our study mention that they have enough opportunities during the meeting to bring their input into the discussion.

*'Ik heb het gevoel dat ze met u echt wel rekening houden maar dan moet je er zelf ook wel moeite voor doen. Ge moet er ten eerste aanwezig zijn en ge moet ook zorgen dat ge een beetje dossierkennis hebt over de patiënt waarover het gaat en dat je op sommige vlakken waar ik vind dat ze in het ziekenhuis niet altijd veel rekening mee houden, dat wij die ook moeten aankaarten. Maar ge moet dat natuurlijk ook wel doen.'*

(GP 2: M, 42y)

On the other hand, it has been stated that MDT meetings are rather speedy meetings and that there is 'no time to waste'. Therefore it can be helpful for the GP to prepare his input and personal views in advance.

*'Le précédent, ça, ça avait été un petit peu moins, je vais dire, un petit peu moins collaboratif, mais justement parce que je pense que cette réunion était un peu moins structurée. Car un des spécialistes qui était impliqué était vraiment très pressé, il est passé, il a dit ce qu'il avait dire,*



*ce qui fait que, bon. Ça n'a pas été inutile je pense, mais là je me suis senti un peu moins impliqué.'*

*(GP 16: M, 40)*

The GP's input is especially important during the later disease stages when a palliative care approach becomes a probability. In early stages of a disease, where deliberation and discussion is mostly about treatment schemes, GPs feel less competent to play a significant role.

*'ja, als het om louter hun vakdomein is de beslissingen, daar kom ik niet veel in tussen, |- uhu <l> -| dan laat ik ze doen, ik bedoel en dat is ook zo, dat is ook zo zoals zij dat willen. Maar als dat bij voorbeeld, en dat is dan als het oudere patiënten zijn, ik bedoel maar die 85 zijn, die al hartfalen hebben, die al dit hebben en waar men nog iets bij ontdekt, zoals mijn tweede patiënte, die is 85 die man, die heeft al een keer lymfeklierkanker gehad, die (...) kanker met uitzaaiingen, de familie heeft zelf beslist, ook met de de de de kinderen en de vrouw, mevrouw was hier van de morgen, van pf we doen daar nu echt niks niet meer aan, we gaan het echt niet meer doen, dat heeft geen enkele zin om |- uhu <l> -| dat nog te gaan doen. Ja dat is dus de vertolking die ik doe, daarnaartoe ja. en dan zeggen zij ook: okee goed. En dan luisteren ze toch. Dan zeggen ze niet: we zouden toch nog wat dat of dat |- ja <l> -| allez, dan ben je toch wel de belangrijke speler'*

*(GP 5: F, 61y)*

- Agreements on *communicating MDT meeting decisions* to the patient.

A major self-perceived responsibility for the GP is to guarantee the continuity of care for the patient. To that extent, they consider the *communication of the MDT meeting decisions* an important responsibility.

*'voor mij is dat een belangrijk luik van de MOC. Ik denk dat dat essentieel is in de MOC, dat wij als huisarts bewaken van: wat wordt er gecommuniceerd, aan wie wordt gecommuniceerd, en door wie gaat dat gecommuniceerd worden?'*

*(GP 2: M, 42y)*

Participants from our study mention different reasons for taking up the role of communicator after the MDT meeting: providing answers to patient's and his/her family's questions by bringing back previously unknown information; enhancing treatment adherence by explaining and advocating the chosen treatment options; ensuring patient's understanding of his/her disease and treatment by providing explanations in line with the level of the patient's health literacy. This conversation is to be seen in continuity with previous conversations with the patient before the MDT meeting.

*'D'abord un relais de l'information et donc un soutien par rapport aux décisions qu'ils vont prendre et donc une meilleure compréhension de la part du patient et donc une meilleure adhésion à son traitement. C'est comme cela que je le vois ; être vraiment le relais pour une meilleur compliance.'*

*(GP 9: F, 56y)*

*'Voilà, du moment que quelqu'un est porteur de la nouvelle et de la proposition thérapeutique, que ce soit le spécialiste ou le généraliste, je pense que vraiment c'est important qu'on puisse éventuellement le gérer mais ce n'est pas indispensable. Par contre, je pense que, par moment, c'est important que ce soit nous qui le fassions. Je trouve que c'est important, par exemple, pour des personnes plus âgées, ou pour des personnes plus psychologiquement fragiles, qu'on arrive chez eux, sans téléphone, sans être dérangé, on met son GSM en silencieux. Parfois les enfants sont là. On explique, c'est parfois plus facile. Donc qu'on ait ce choix éventuel qu'on puisse le faire nous-même mais il y a des gens qui sont à l'aise et il y a des gens qui sont pas à l'aise avec ça, hein. Oui, je pense que c'est bien !'*

*(GP 14: F, 48y)*

It is usually *agreed upon during the MDT meeting* who will take responsibility for discussing the decisions with the patient. According to participants of this study, coordinating the caregivers, which results in consistency of care, is an important aspect of the MDT meeting and enhances patient's confidence in the professional team.

*'ik denk dat het belangrijkste is de samenwerking van de specialisten en specialismen die er bij betrokken zijn, dat de patiënt voelt dat er een eensgezindheid is tussen iedereen. Dat niet iemand zegt ik wil dat en de andere niet. Er wordt aan hetzelfde zeel getrokken. En ik denk op lange termijn dat dat voor veel patiënten hoe moet ik zeggen? Gemoedsrust geeft.'*

*(GP 6: M, 58y)*

Agreements on communicating the decisions to the patient are sometimes depending on the patient's whereabouts (e.g. when the patient is hospitalized, mostly the medical specialist will make a visit to communicate the treatment decisions).

### 6.3.2.2 What are the GPs' current experiences (barriers and facilitators) with the MDT meetings?

Participants mention practical and interpersonal themes influencing the way they play their role in the MDT meeting. These themes contain barriers as well as facilitators: some influence the GPs' preparedness to attend the MDT meeting, while others mainly influence the GPs' role during the MDT meeting.

#### 1 – Practical factors influencing participation of GPs in MDT meetings

##### Time aspects:

- **The timing of the MDT meeting during the day:** GPs in our study find it difficult when they have to leave practice during consultation time to attend the MDT meeting. Having many patients waiting while they are caring for one patient by attending the MDT meeting is not always an easy decision as it may endanger the continuity of care for other patients. The prioritisation between different patients and their needs is not always easy to decide upon.

*'À part les problèmes organisationnels, d'autres réunions, des patients à voir, parce que oui, il faut quand même voir les patients, c'est la base du boulot. Des visites. Ça c'est ce qui me freinerait dans le fait d'aller à une COM. Mais sinon dès que j'ai la possibilité...'*

*(GP 11 : M, 37y)*

For most GPs, noon seems to be the best time (no interference with daily practice schedules), especially when a small lunch (e.g. sandwiches) is provided so there is no loss of lunchtime.

- **The timing of the invitation:** When GPs are informed at too short notice, it is difficult to organise their practice to participate (especially for single-handed practices). Group practices find it easier to arrange the practice and to have someone available to attend the MDT meeting.

*'Moi je pense vraiment que c'est une question horaire. Je pense que si je participe plus que certains de mes confrères, c'est parce que j'ai la chance de travailler ici avec des copains, que je peux dire « demain, entre 10 et 11 je serai absent parce que je vais là-bas », et je peux parfaitement comprendre qu'un confrère qui est plus débordé que moi se dise que c'est quelque chose de moins prioritaire que d'aller voir certains patients. Je peux le comprendre et en même temps je pense que la participation à certaines COM est vraisemblablement aussi importante que...mais bon, voilà, ça c'est le contexte de travail, d'organisation de travail de la médecine générale.'*

*(GP 16: M, 40)*

Both telephone and email notifications are acceptable (though not everyone checks his/her email constantly), provided they are delivered in a timely manner.

*'En in het UZ loopt dat hopeloos fout, dat is afschuwelijk. Elke MOC, elke groep heeft daar een ander tijdstip, een andere MOC, een andere locatie. We worden verwittigd per mail de dag zelf. Nu, de post wordt hier binnen gehaald 's morgens door het secretariaat om 8 uur, maar ik kijk niet om 9 uur al naar mijn post om te zien dat ik om 11 u 30 of om 12 uur in het UZ moet zijn. Ik bedoel: ik denk dat ze in het UZ ook niet het belang inschatten dat je als huisarts hecht aan een MOC.'*

*(GP 1: F, 55y)*

GPs are sometimes simply not invited at the MDT meetings.

*'En ik weet dat uit ons bestuur. Iemand die veel contact heeft met het ziekenhuis X, de MOC wordt daar voor zover ik weet tot nu toe de huisarts zelfs niet uitgenodigd. Dus die MOC werkt daar niet, allee, werkt daar niet zoals het zou moeten werken. De huisarts is daar, allee,*



*ik vind principieel eigenlijk allee, moét de huisarts uitgenodigd worden. Dat hij komt of niet, dat is een andere zaak. Maar die moét uitgenodigd worden. Als zijn patiënt besproken, ik kan mij niet voorstellen dat die niet uitgenodigd wordt, ik vind dat een aberratie. Maar ik weet dat dat dus niet goed gebeurt. De reden waarom dat weet ik ook niet. ... En dat vind ik erg. ... Ik weet ook van collega's dat die niet worden uitgenodigd.'*

*(GP 6: M, 58y)*

- **The time management during the MDT meeting:** GPs appreciate very much that the MDT meeting starts at the scheduled time and that discussions are efficient so that they mostly do not lose more than 15 minutes per patient. They also much appreciate the flexible MDT meeting agenda, as a GP's patient is discussed directly upon the GP's arrival. As the 'first come, first serve' principle is used, some GPs try to arrive early.

*'Het grote voordeel is ook, ze zijn daar heel correct in. Ge gaat daar naartoe, ze bespreken de patiënt verder dat ze bezig zijn en dan is het direct aan u. Ge zit daar max een kwartier, 20 minuten dat ge daar aanwezig zijt tijdens dewelke uw patiënt wordt besproken. Dan moogt ge weggaan, dan doen ze de andere he.'*

*(GP 6: M, 58y)*

*'Et bien chaque fois on a commencé par mon cas où ils ont terminé le cas en cours et ils ont fait en sorte que l'on parle de mon patient tout de suite après et ...donc cela m'a pris un quart d'heure, un quart d'heure déplacement non compris...'*

*(GP 9: F, 56y)*

### **The geographic proximity of the hospital:**

Distance seems mostly to play a role because of the time spent travelling. When a hospital is too far away, MDT meetings are skipped and replaced by telephone calls. Distance as a single factor, however, may not be decisive as GPs do travel far e.g. to visit a patient in a palliative care unit. So the MDT meeting ('just a 10-minute meeting') might not be considered worthwhile

travelling far for, especially since there are alternatives for information exchange (e.g. a telephone call).

*'Nee, nee, ik ga nooit euh, ik ben nog nooit in een MOC in een ander ziekenhuis geweest. Nee.'*

*I: Omwille van, de de duur van de afstand?*

*J: Ja. Ja. Niet om gebrek aan interesse euh, maar natuurlijk in Lier het gelijkvloers ge gaat daar binnen, euh, 'k ga daar tegen acht uur naar toe, kwart na acht, twintig na acht zijt ge daar buiten. Ge kunt nog iets anders plannen, een huisbezoek. Ik ga niet euh naar Augustinus rijden op een morgen om acht uur, in de file, allez ik geraak daar niet eh. Nee, nee. Dat doe ik niet. Het ligt me... 'k zal dan wel al es bellen en, 'k hou mij wel op de hoogte van de patiënt zijn toestand en zo. Of, dat wel. Maar MOC nooit. Nee.'*

*(GP 7: M, 63y)*

*'Ik euh, ik ga alleen naar het ziekenhuis in Lier. Ik word al es ne keer gevraagd, ook soms in Duffel, of zelfs ne keer in Antwerpen, omdat ik nog ook wel patiënten heb in Vincentius Augustinus ziekenhuis. Heb ik af en toe patiënten, ga ik nooit. Ik euh, die inspanning, allez ja, kan ik nie, nie opbrengen. Als het echt patiënten zijn, die zo echt preterminaal zijn in een ziekenhuis in Antwerpen, probeer ik er ook wel op bezoek te gaan. Zelfs es in Leuven, ja ik, mensen waarmee ik echt een goede band heb opgebouwd en die zijn ge moet dan naar Leuven, of naar Antwerpen, en sterven daar, of probeer ik daar toch ook op bezoek te gaan. Vraagt wel wat inspanning, maar het loont. Veel.. Allez loont ook voor mezelf. Ik vind dat een deel van mijn werk.'*

*(GP 7: M, 63y)*

GPs' more frequent attendance at MDT meetings in nearby hospitals may be explained by another argument, namely interpersonal relationships. Medical specialists and GPs know each other better when the hospital is nearby. A good interpersonal relationship enhances GPs readiness to attend the MDT meeting and vice versa, attending the MDT meeting and meeting each other in real life strengthens the relationship.



*‘Comme vous l’avez compris ici sur Chimay, c’est quand même particulier. Il y a une proximité qui est quand même appréciable. Et à mon avis, voilà, qui ne doit pas se rencontrer partout. Voilà, des patients qui sont pris en charge sur des gros centres hospitaliers où je n’ai pas vraiment de contact, où je ne connais pas vraiment les médecins, je pense que l’accès est plus difficile. Voilà, parce qu’on ne sait pas où. C’est difficile de savoir comment, qui sont ces personnes ? Alors je pense que moi, je n’y vais pas spontanément dans ce genre d’endroits. Parce que, voilà, il y a aussi les kilomètres qui sont présents.’*

(GP 10: F, 38y)

*‘La proximité, oui. Et alors voilà, vous avez des centres hospitaliers extrêmement spécialisé dans les pathologies, vous avez, je pense à une patiente qui s’est fait soigner à Bordet. Ca a été très compliqué pour moi, pour le suivi. Je n’ai pas eu accès. Fin, finalement j’ai quand même pris mon téléphone. C’était des médecins que je ne connaissais pas. Je ne pouvais pas me rendre évidemment sur place, pour ces COMs. Donc, on a discuté par téléphone. Voilà, je crois quand même que les centres hospitaliers spécialisés offrent beaucoup d’avantages thérapeutiques pour le patient, c’est évident. On est clairement sur une information qui est au top. On sait. Mais voilà, je trouve que les hôpitaux de proximité offrent un autre avantage, c’est les délais de réaction qui sont franchement...’*

(GP 10: F, 38y)

#### **The remuneration for MDT meeting attendance:**

The remuneration is only mentioned by the interviewees after explicit questions on it. Participating GPs state that it’s normal to be paid as they make an effort, but on the other hand, MDT meeting participation is considered part of their job and a service to the patient so the remuneration is no priority and surely no barrier.

*‘Euh, ‘k vind, allez, ‘k vind dat wel correct dat je toch, als je moeite doet, dat je toch voor iets beloond wordt. ‘k Ga niet zeggen dat dat mijn primaire drijfveer is om het te doen, dat ook niet maar ‘k vind het niet slecht dat je er toch iets voor krijgt. ‘k Vind toch, allez ja als gij de moeite doet voor iets te doen voor uw patiënt, dat je daar toch mag voor*

*beloond worden natuurlijk ja, als dat uw enige drijfveer is, dan is dat ook wel erg, maar ‘t is aangenaam bijgekomen dat je geapprecieerd wordt daarvoor beetje.’*

(GP 4: M, 38y)

*‘(la rémunération) c’est un élément important ? Ho, non, ce n’est pas un élément important, mais c’est vrai aussi que ça prend pas mal de temps, en théorie on remplit un document... (...) Mais attention, moi je raisonne comme ça mais j’ai mon âge, mais je sais que les plus jeunes ne raisonnent plus comme ça (...) tout travail doit être rémunéré, et qu’effectivement comme c’est prévu... Quand je vois par exemple mes jeunes collègues si elles ont été à un truc et qu’elles n’ont pas été payées, elles vont retéléphoner pour dire « hé, quand est-ce qu’on sera payé de ça? » c’est normal elles ont raison.’*

(GP 15: M, 62y)

#### **The educational aspect of the MDT meeting:**

Participating GPs state the MDT meetings to be informative to them in regards to *scientific knowledge* (e.g. new chemotherapy regimens), although it does not replace continuing medical education.

*‘Wel, het is wel een manier om kennis bij te blijven he. Er is evolutie op oncologisch vlak waarbij dat ge vooral aan de hand van casuïstiek toch wat extra input en extra kennis kunt verwerven.’*

(GP 2: M, 42y)

#### **The team composition of the MDT meeting:**

In some hospitals, the specialists attending the MDT meeting are not the same as the specialists treating the patient. This results in MDT meeting discussions and decision that are not always taken into account during the following treatment of the patient. Consequently, GPs doubt the benefits of attending these kinds of MDT meetings.

*‘Als gij naar een MOC gaat bij het begin van een behandelingsplan en ge zijt daar bij en ge spreekt over een aantal zaken, maar daar wordt er verder niet meer op terug gekomen, na, dan heb je het gevoel: wat ben ik daar gaan doen he.*



*I: dat is ook een ervaring die je al gehad hebt?*

*B: ja.*

*I: en waar heeft dat dan mee te maken?*

*B: dat heeft vaak te maken met de anonimiteit van de specialisten. Vooral in het UZ is dat een probleem omdat patiënten bij de diagnose door dokter x behandeld worden, in supervisie bij een assistent die dat dan volgt. Ge gaat naar de MOC en ge hebt eigenlijk wel wat interactie met die ..., maar in het verder verhaal wordt dat dan een behandeling door een groep andere mensen gedaan.'*

*(GP 2: M,42y)*

#### **The video-conference:**

Though GPs appreciate and welcome MDT meeting through videoconferencing, they also mention a practical barrier. The use of different technical systems for MDT meeting through videoconferencing used by different hospitals is very confusing to GPs and not very inviting.

*'Ja, dat ergert mij mateloos in het UZ als dat niet vlot gaat. Dat we verwend zijn he, en ik denk altijd; alle, waarom doen jullie dat niet in de rest van de ziekenhuizen? Waarom moeten ze opnieuw het warm water uitvinden? Het gaat goed. Ze hebben de problemen gehad met fire walls en inloggen en hoe kan dat veilig, en beveiliging. Waarom moet een ander ziekenhuis tot hetzelfde komen? Blijkbaar gaat het minder goed. Allee.'*

*(GP 1: F,55y)*

## **2 – Interpersonal factors influencing participation of GPs in MDT meetings**

Although participants of our study express themselves in favour of the MDT meeting, they specify some aspects limiting GPs' active participation during the meeting. These experiences are demotivating and may restrict GPs' participation in the future.

#### **Interpersonal aspects during MDT meetings:**

A discouraging interpersonal theme is the feeling of not being valued (as a person or as a professional) and the feeling of not being part of the team leads to lesser efforts of the GP for future participation (as described earlier).

Contrarily, participants also mention a better interpersonal relationship with some specialists emerging through MDT meeting participation. Equally, the GPs' precise role description during the MDT meeting was mentioned as a benefit. These effects of the MDT meeting are welcomed and may act as a facilitator for future attendance.

*'mijn doorverwijsgedrag denk ik. Ik denk dat ik zelfs mijn oncologische patiënten doorverwijs naar het ziekenhuis die die teleMOC aanbiedt omwille van het feit dat door die teleMOC, dat ge een betere verstandhouding hebt met de specialisten.'*

*I: dus het is ook iets dat een stuk vanuit uzelf gestuurd wordt?*

*B: ja. Dat groeit ook he. Als ge een patiënt doorverwijst, en je weet : dat is mijn plaats in dat ziekenhuis of mijn plaats wordt daar gerespecteerd en gevalideerd, de communicatie verloopt beter, voor de patiënt geeft dat meer vertrouwen, dan stimuleert dat ook in de beide richtingen'*

*(GP 2: M, 42y)*

#### **Interprofessional contact previous to the MDT meeting:**

When the *result of the MDT meeting discussion is known in advance* (e.g. through pre-MDT meeting contact between GP and specialist) or when the case in itself and the home care *situation is not complex at all* (e.g. breast cancer patient without comorbidities and straightforward therapeutic regimens), GPs in this study mention not being motivated to make efforts to participate in the MDT meeting.

*'En we hebben dan een paar maanden later ook een MOC van iemand met een colonbehandeling, die ze ook zeiden van: hij had van de specialist gehoord dat hij palliatief ging zijn omdat ze eigenlijk niets meer gingen doen en een week later was het MOC. Dat mijn collega zegt: het is voor te zeggen dat ze niets meer gaan doen. Daar moet eigenlijk niemand naartoe gaan. Ah ja. Omdat ge daar ook tijd mee kwijt'*



*zijn en als het inderdaad maar is voor dat te zeggen, allee, we leren er als huisarts niets bij.*

*I: als het alleen maar is om dat te zeggen, hoe bedoel je dan?*

*L: hewel, als het alleen maar is om te zeggen dat patiënt palliatief is, de behandeling wordt stopgezet, we gaan geen andere behandeling meer opstarten. Als je dat al weet als huisarts, dan is dat misschien dat de specialist dat efkes wil checken bij de andere collega's. Dat gebeurt zelden hoor. Misschien bij 2 of 3 MOCs dat we niet geweest zijn omdat we wisten, en dan is dat meestal omdat we kort voordien al iemand gehoord hebben die zei: "dat zal de beslissing zijn".'*

*(GP 3 : F, 29y)*

#### **Professional confidentiality:**

Professional confidentiality has been named as a barrier since attending MDT meetings leads to overhearing other patients' stories.

*'Je ne me sentais pas à l'aise d'être au milieu des autres spécialistes et d'entendre discuter de patients qui ne me regardent pas et il y avait les noms et tout ça et je me disais que ce n'était pas tellement ma place'*

*(GP 12: M, 39y)*

Contrarily, to other participants of this study, the discussions about other patients act as a facilitator for attendance, as a means of learning more about cancer care.

*'een gezamenlijk proces inderdaad. En dat duurt eigenlijk niet zo lang, ik verschiet er altijd van. Zo'n oncologisch consult, tien minuten, max een kwartier en meestal zijn dan de geesten in dezelfde richting gesteld. En dat, voor mij is dat ook heel boeiend want ik blijf soms zelf langer zitten als het mijn patiënten niet zijn, gewoon omdat ik vind dat boeiend van te zien hoe dat ze daar gewoon over praten.'*

*(GP 6: M, 58y)*

#### **6.3.2.3 What are the GPs' suggestions and expectations toward future effective participation in the MDT meeting?**

Based on their experiences as described above, study participants expressed their preferences towards future MDT meeting participation according to three different domains: GPs' responsibility and continuity of care; the organisational aspects of the MDT meeting; and the meeting dynamics during the MDT meeting.

##### **The GPs' responsibility and continuity of care:**

GPs consider their participation in the MDT meeting to be self-evident as a part of their job and are willing to invest time and energy in it. As they consider MDT meeting participation as one of their responsibilities, they prefer to attend whenever possible. GPs in this study position the MDT meeting as an element in the continuity of patient care and not as an isolated meeting between health professionals. A major prerequisite is mentioned in order to realise this continuity, namely *information flow*. A MDT meeting discussion must be based on all previously known relevant information (both physicians' and patient's information) and lead to conclusions which must be communicated to all relevant actors (again both physicians and patient/family members). Only when such information-transparency and information-coherence are realised, the MDT meetings have a rightful place in the GP's task description concerning continuity of care.

##### **The organisational aspects of the MDT meeting:**

- The invitation:  
There was no general preference about the way the invitation was delivered (by email or by telephone) but there was consensus that it needed to be *timely in order for the practice to be organised*. Furthermore, this would offer the opportunity to the GP to prepare for the discussion and even to talk with the patient before the MDT meeting to clarify the patient's view. If a timely invitation is difficult, then a telephone alert was preferred.

*'Donc je pense qu'il faut les (les autres MG) inciter et je pense que une des façons, je pense qu'un contact personnel ça peut être efficace. Ici par exemple, moi, maintenant, je reçois aussi par mail, donc je peux*



*être informé sauf quand c'est décidé en dernière minute, mais je pense que par exemple si l'infirmier ou l'infirmière de coordination, puisque c'est son rôle dans le service d'oncologie, peut téléphoner au médecin en disant « ben voilà, il y aura la concertation de votre patient tel jour à telle heure, est-ce que vous venez ? ».*

*(GP 15: M, 62y)*

- The timing of the MDT meeting:

There were differing ideas, but organising the MDT meeting at noon seems preferable because this causes the least interference with daily practice.

*'Ja, in feite is dat zouden ze bijna moeten maken dat dat altijd rond, tussen, op allez rond 12 of rond 1 is. Dat dat plaats vindt.'*

*(GP 4: M, 38y)*

*'Toujours à la même heure. Toujours sur l'heure de midi qui est l'heure la plus facilement ...switchable...parce le matin consultation, l'après-midi rendez-vous donc....'*

*(GP 14: F, 48y)*

- The MDT meeting through video-conferencing:

This has been described by our study participants in a positive way, though not all of them had experience with it. The most positive attribute of video-MDT meeting is the limited impact it has on practice organisation and time loss. Participants expressed a preference towards expanding the implementation of video-MDT meeting. On the other hand, GPs mention the loss of personal contact during video-MDT meeting, which has previously been named as a strong benefit of a regular meeting. It is not clear if this loss is being outweighed by the practical benefits of video-MDT meeting.

*'Ha: daar hebben we een tele-MOC. En dat gaat schitterend. Dat werkt perfect. Er kan altijd iemand uit de praktijk inloggen. We worden twee dagen tevoren meestal verwittigd, de vrijdag voor de maandag of de maandag voor de donderdag. Dat is over de middag bij hen; ge krijgt een uur om in te loggen en dat duurt maximum 10 minuten. Ge verliest daar geen tijd mee, we zijn hier toch op de praktijk, of ge komt terug en*

*zijt ge een beetje te vroeg, ge kunt iets van post doen, ge kunt iets anders doen, een dossier bijwerken, ge kunt direct in uw dossier meekijken, mee invullen op de computer. Ge ziet ook de collega's in de zaal, zij zien u. Ik vind dat schitterend.'*

*(GP 1: F, 55y)*

*'Et voilà, l'outil informatique est quelque chose que je maîtrise plus que moyennement. Donc voilà, je préfère toujours aller serrer la main au gens.'*

*(GP 10: F, 38y)*

*'Le contact humain passe moins bien. Et puis, étant à dix minutes de l'hôpital, je ne gagnerais pas tellement de temps parce que, là aussi, je vais me retrouver dans le flux d'une réunion et ça demande une attention et ... enfin j'ai déjà eu une réunion comme ça, enfin par ordinateur, et je trouvais ça plus difficile à suivre'*

*(GP 12: M, 39y)*

### The meeting dynamics during the MDT meeting:

Participants expressed their preferences and expectations on three aspects, building on the description of the GPs' current experiences:

- Time efficiency:

As time management seems to be very important for GPs, the practical organisation of the MDT meeting is fundamental: giving priority to patients of participating GPs, structuring the discussion and making sure that the necessary specialists are present are factors that have been mentioned.

- Agreements on communication of the MDT meeting results to the patient:

There must be clear agreement on what has to be said to the patient and by whom it will be said, in order to avoid conflicts of differing messages.



- The educational effect of the MDT meeting:  
Some GPs mention the educational significance of a MDT meeting. Paying attention to this aspect of the discussion, with information delivery tailored to the GPs' needs, could be important.

## 6.4 Discussion

The overall meaning of the study results can be formulated in this way:

“GPs are prepared to participate in every MDT meeting, whenever it is feasible and whenever it is useful”.

This phrase summarises the 3 most important findings:

1. Attendance to a MDT meeting is part of the GP's work
2. The practical organisation of MDT meetings and the GP's practice often act as barriers to attendance
3. The GP's perceived added value to the MDT meeting is an important motivator to participate

The discussion of these three findings reveals some opportunities and starting points to enhance the GPs' attendance and their participation in the MDT meeting.

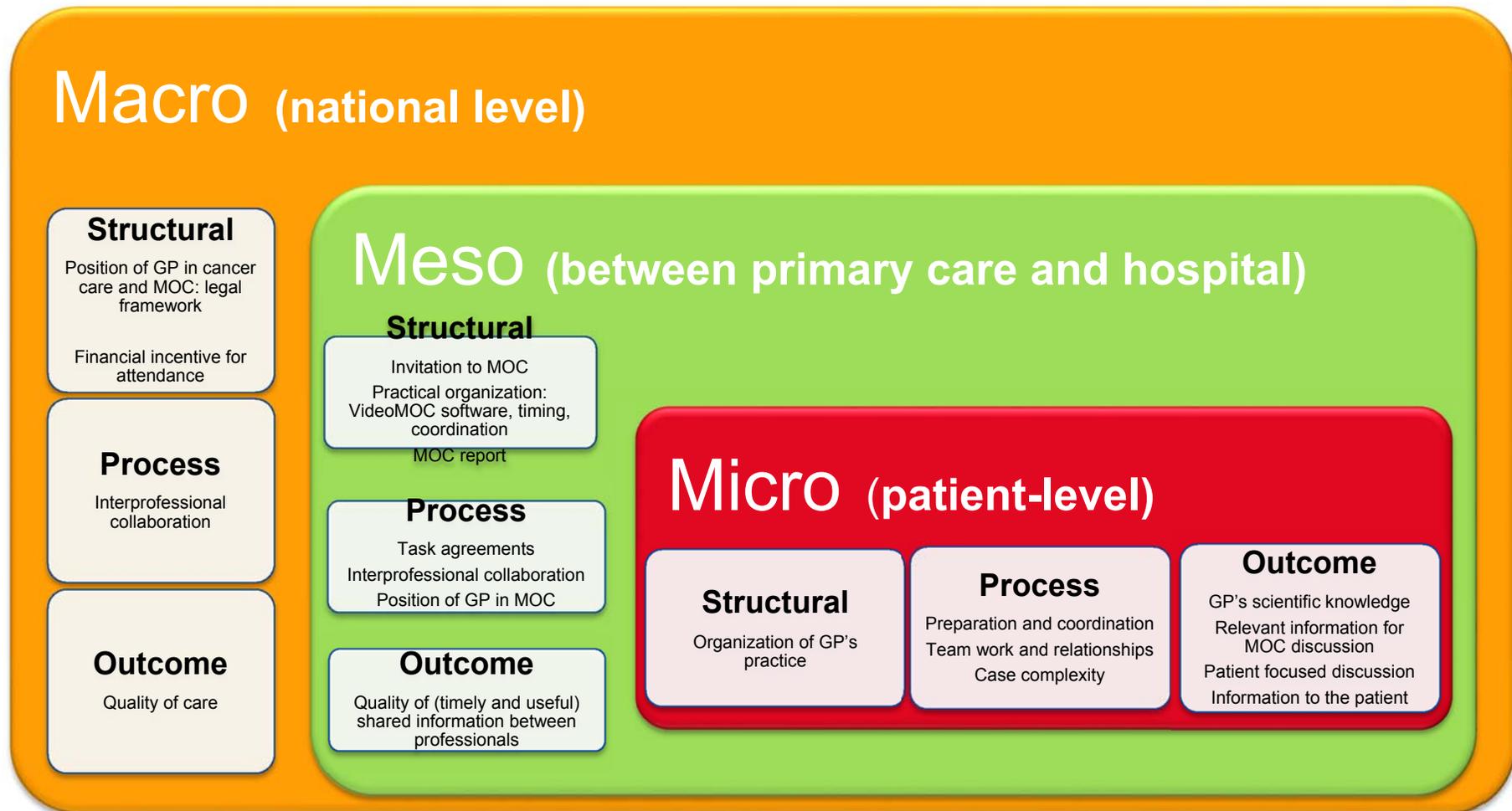
These opportunities can be reported using two frameworks:

- Themes on micro-, meso- and macro-level, referring to the organisation of healthcare delivery.<sup>74</sup>
- Themes on structural, process and outcome measures, referring to the evaluation of the quality of care.<sup>75</sup>

An overview of the main results according to these two frameworks is presented in Figure 38.



Figure 38 – Main themes influencing the GP’s role in the MDT meeting





#### 6.4.1 Attendance to the MDT meeting is part of the GP's work

Attending the MDT meeting is seen as an integral part of the continuing care GPs provide to their patients. As a result, GPs want to take up their responsibility and participate in the MDT meeting.

The rationale for this choice is to be found in the GP core competences, as described by the World Organization of Family Doctors (WONCA).<sup>k</sup> All competences have been mentioned by the participating GPs in their motivation to attend the MDT meetings. All participants of our study however are GPs with MDT meeting experience and therefore this result may be influenced by this bias. We do not know whether GPs without MDT meeting experience would have responded in the same way.

These core competences are:

1. Holistic approach: including psycho-social aspects
2. Person-centred care: doctor-patient relationship and context-/patient-centred approach
3. Primary care management: first point of contact, coordination of care
4. Comprehensive approach: acute and chronic problems, health promotion and well-being
5. Specific problem-solving skills: impact of prevalence and incidence, early/un-differenced stage
6. Community orientation

A major topic of concern for the participating GPs is the continuing information flow. The patient's history (medical and non-medical) must inform the MDT meeting discussion which in turn must shape the organisation of care in the future. The optimisation of this information flow may comprise interventions on multiple levels: preparedness to share information (micro-process level), organisational aspects of the MDT meeting providing time and space (meso-process level), and the practical requirements for managing all the information in an accessible way, e.g. in a shared online Electronic Health Record (macro-structural level).

Other studies confirm the specific tasks and roles of GPs during cancer follow-up, thereby stressing the need to install a reliable information flow. The tasks and roles mentioned in the literature are: flexible mediator (between patient and clinic, interpreting and translating), efficient handyman (solving practical problems locally), and personal companion throughout illness.<sup>76, 77</sup> They are congruent with our findings. This confirms the statement that the MDT meeting process is in the scope of action and responsibility of the GP.

#### 6.4.2 The practical organisation of MDT meetings and GP's practice often act as barriers to attendance (Structural aspects on micro- and meso-level)

The majority of the practical aspects of the MDT meeting organisation which need improvement, concern time management aspects. Some suggestions can be made: to be invited on time, direct contact during the invitation, the choice for a protected time period outside consultations and home visits, and effective discussion on the time they arrive (without waiting time). This practical inconvenience has to be outweighed by the perceived benefit of attendance in order for the GP to participate.<sup>78</sup> Other authors suggest, however, planning enough time during the discussion for each case.<sup>79</sup>

The positive interactions during the MDT meeting are based on good interprofessional relationships (GP and specialist). In regions with low hospital density, the cancer specialist network is smaller and may facilitate interpersonal relationships between GPs and the local hospital specialists. But as low hospital density is associated with longer distances to other entities, this factor plays an inhibitive role for attending MDT meetings in more distant hospitals.

A good relationship enhances GPs' efforts for attending MDT meetings. It might be helpful, e.g. by organising joint CME sessions, to foster interprofessional relationships in different ways (macro- and meso-structural). The literature shows that interprofessional education leads to better interprofessional collaboration, which in its turn leads to better patient care.<sup>80, 81</sup>

<sup>k</sup> <http://www.woncaeurope.org/gp-definitions>



As suggested by the participants, the GPs' practice organisation may interfere with attending the MDT meeting. Group practices, as they share care and workload between colleagues, may have an advantage in this.<sup>1</sup> Practice organisation does not seem to influence the continuity of out-of-hours palliative care provision.<sup>82</sup>

#### *6.4.3 The GP's perceived added value to the MDT meeting discussion is an important motivator to participate*

A GP's self-confidence about his/her contribution to the MDT meeting process varies between GPs. The MDT meeting is often perceived as a multidisciplinary process focused on medical expertise. Some GPs found it difficult to bring non-medical information (psychosocial or patient-context related information) into the discussion, as has also been described in the literature.<sup>83</sup> This might even be more difficult if the GP is not sure whether he/she represents the patient's view, due to lack of an official declaration or written statement from the patient, e.g. ACP documents (meso-process). A timely invitation, offering the GP enough time and opportunity to contact the patient and discuss his/her will before the MDT meeting, might reinforce the GP's participation. Research shows that there is no uniform policy between hospitals on how and when GPs are invited.

In the complex situation of cancer care, collaboration between GPs and specialists is a necessity. GPs spontaneously respond to this need by getting into direct contact with the oncologist and by using networks of trusted healthcare providers.<sup>84</sup> In our study, those informal contacts remain important and are complementary to the MDT meeting. Building those health professional networks is even stated as being an explicit outcome of the meetings (meso-process and -outcome).

GPs recognise that the perceived degree of complexity needs to be high enough to motivate him/her to attend the MDT meeting. This statement questions the necessity of GPs' attendance of all MDT meetings where their patients are discussed. Another way of sharing information could be preferred in the case where treatment choice is less complex.<sup>79</sup> Healthcare

professionals (e.g. specialised nurses in oncology, MDT meeting organisers) calling them before the MDT meeting with specific questions (functional status of the patient, patient's preference or will, specific aspect of home care, socio-economic organisation), so that the GP can fulfil his/her role without being present. This puts emphasis on the GP's specific role, and could represent a time-saving procedure for the GP and the other specialists. The benefit of a group discussion with other disciplines, however, is lost in this way.

Remuneration is not valued very highly. To our respondents, the financial aspect does not outweigh the described barriers. It cannot be concluded from this study if the remuneration would gain importance in the case of compulsory attendance to a higher frequency of MDT meetings.

#### *6.4.4 Some suggestions for improvement*

Participants from our study stated their preferences about the MDT meeting's process and results. These are discussed and formulated as suggestions for improvement and presented in Figure 22.

Some advantages have been mentioned about video-MDT meeting: more GPs will participate mainly due to the lack of interference with practice organisation. A prerequisite for an effective implementation of video-MDT meeting is the use of a uniform and simple software package to make it acceptable for less IT-minded GPs. Unfortunately, the networking effect, recognised as a strong motivation factor by participants, will be lost.

In addition, there are differing views towards the added value of meeting each other during the MDT meeting. There is a range from preferences of actually meeting others, through participation through video-MDT meeting, to preferences of a private telephone call to the specialist. Depending on the prioritisation in the practice (which patients need more attention), the value of interpersonal contact, and the ease of participation in a group discussion, GPs might be motivated to participate in MDT meetings or not. Exploring possible strategies for selecting appropriate patient cases for in-person MDT meetings might benefit the tight schedule and speedy meetings.

<sup>1</sup> In the province of Luxembourg, the density of GPs (2009) is the lowest and the decrease in home visits (between 2006–2010) the highest in Belgium.



The synergy and complementarity between GPs and specialists during the multidisciplinary oncological consultation has to be highlighted. The MDT meeting’s organisers, the specialists, and the GPs need to be informed and convinced of the added value of sharing their expertise. The MDT meeting process may benefit from a clarification of each participant’s role, as many other studies have shown.<sup>84, 85</sup>

Some important information coming from the patient (functional status, patient’s will about treatment options) is needed for the organisation of care at home (side-effects, extent of the home care for coordination) could be systematically integrated in the MDT meeting discussion and translated into the MDT meeting report. GPs suggest a more detailed report including specific information relating to the GP’s perceived role: information for the patient (what has to be said by whom), information for the organisation of

care at home (what is needed, what can be expected). Other studies have emphasised the importance of good communication after the process and claim that the report has a good structure.<sup>77, 86, 87</sup> In the MDT meeting process, as in general, there is an opportunity for GPs and specialists to reach an agreement on what a report should include to raise its utility.<sup>88</sup> Standardising the MDT meeting report, with the aid of a shared electronic patient health record might optimise the efficiency of the information flow.

A MDT meeting is an operationalisation of a good concept: interprofessional patient care. Embedding the MDT meeting in a continuous process of interprofessional oncological care might raise the awareness, conviction and commitment of all participants to enhance the effectiveness of the entire care process.

Table 27 – Main themes for improvement

	Structural	Process	Outcome
<b>Micro (patient-level)</b>	Video-MDT meeting software	Preparation of information according to MDT meeting agenda and focus Patient’s selection	
<b>Meso (between primary care and hospital)</b>	Timely invitations	Patient’s selection and concomitant level/mode of communication	MDT meeting report
<b>Macro (national level)</b>	Position of GP in cancer care Clarification of role and position of GP in MDT meeting	Stimulation of interprofessional collaboration	



## 6.5 Strengths and limitations of the study

### 6.5.1 Strengths

This is the first time the GPs' preferences and experiences have been collected and described. The sampling has been done countrywide.

### 6.5.2 Limitations

We cannot exclude a social desirability in some answers, as the participants were interviewed by peers (the interviewers were GPs like the participants). This may have influenced discussions on willingness to attend and discussions on remuneration. However, this is not a risk for the validity of the discussions on barriers to attendance. Suggestions for improvement focus on overcoming the barriers and are therefore valid.

We cannot conclude from this study what the opinions are of GPs with no MDT meeting experience. GPs without MDT meeting experience may have other barriers for attendance than participants from our study. These barriers, however, will not originate from lived experiences and may only originate from second-hand knowledge (or lack of knowledge) on MDT meetings. The results of the QUALICOPC study indicate that 20.1% of Flemish GPs and 57.4% of Walloon GPs are not aware of the MDT meeting existence (Presentation by Prof dr Sara Willems on the results of the QUALICOPC study on 25/03/2014 for the NRKP).

## 6.6 Key messages

### GPs have a unique position in health care:

- This position results from sharing a history of longitudinal care with the patient, leading to the acquisition of unique information on medical, personal and social patient-related topics.
- This information and the patient's expectations render the GP a representative of the patient.

### As a result of their unique position:

- GPs perceive MDT meeting participation as part of their job
- GPs are willing to make efforts to attend the MDT meetings

### During the MDT meetings, the GPs tasks and roles are dependant on:

- the complexity of the patient's case
- the quality of the interactions with other MDT meeting participants
- practical and contextual variables
- task agreements between GPs and hospital specialists

The GPs' current experience with MDT meetings are mixed and are dependant on:

- practical factors like the timing and quality of the invitation, timing of the MDT meeting during the day, proximity of the hospital, the team composition during the meetings
- interpersonal factors like the quality of the relationship with specialists, the feeling of being valued as a person and as a health professional, and the educational aspect of the MDT meeting

### Alternative for MDT meetings:

- MDT meeting through videoconferencing is a valued alternative, though difficulties with the use of different software and techniques may be an obstacle.

The MDT meeting process in itself fosters interpersonal contact with specialists, eventually leading to better patient care.

As GPs are willing to take their responsibility in the continuity of patient care, they made some suggestions for improvement:

- the information-flow must be fluid and high-quality, starting from the invitation and ending with the report
- the MDT meeting timing is best at noon to interfere as little as possible with the GPs' practices
- video-MDT meeting should be made accessible and easy to use
- during the MDT meeting, attention should be paid towards time-efficiency, the educational aspects of the MDT meeting and towards clear agreements on communicating MDT meeting results to the patient.



## **7 CONCLUSION, DISCUSSION AND POLICY RECOMMENDATIONS**

Conclusion, discussion and policy recommendation are presented in the document entitled “Summary of the scientific report” which is available on the KCE website.



## ■ REFERENCES

1. Borrás JM, Albrecht T, Audisio R, Briers E, Casali P, Esperou H, et al. Policy statement on multidisciplinary cancer care. *Eur J Cancer*. 2014;50(3):475-80.
2. Van Belle S. How to implement the multidisciplinary approach in prostate cancer management: the Belgian model. *BJU Int*. 2008;101 Suppl 2:2-4.
3. Gouveia J, Coleman MP, Haward R, Zanetti R, Hakama M, Borrás JM, et al. Improving cancer control in the European Union: conclusions from the Lisbon round-table under the Portuguese EU Presidency, 2007. *Eur J Cancer*. 2008;44(10):1457-62.
4. Requier C. La COM, Consultation/Concertation Oncologique Multidisciplinaire, travail de fin de stage. Bruxelles: INAMI, SECM; 2012.
5. Onkelinx L. National Cancer Plan 2008-2010. Brussels: 2008.
6. Mores B. 10 jaar strijd voor een al dan niet verplicht multidisciplinair oncologisch consult (MOC) en een verplichte registratie in de kankerincidentie in België. Bruxelles: Centre du cancer - Kankercentrum; 2013.
7. Vlaamse Liga tegen Kanker en Stichting tegen Kanker. Wat leren we uit de resultaten van de evaluatie van het Kankerplan? 2012. Available from: [http://www.tegenkanker.be/sites/vlk/files/20121127-VisieVLK-STK\\_Kankerplan.pdf](http://www.tegenkanker.be/sites/vlk/files/20121127-VisieVLK-STK_Kankerplan.pdf)
8. Patients' Rights Act 22 August 2002. Official Journal 26 September 2002. 2002.
9. Evans AC, Zorbas HM, Keaney MA, Sidhom MA, Goodwin HE, Peterson JC. Medicolegal implications of a multidisciplinary approach to cancer care: consensus recommendations from a national workshop. *Med J Aust*. 2008;188(7):401-4.
10. Van Der Straete IP, J. "Het gedeeld beroepsgeheim en het gezamenlijk beroepsgeheim – Halve smart of dubbel leed?", R.W. 2004-2005, 41-59.



11. Verhaegen M.N. and Herveg J. "Quand la communication du secret médical à des tiers est mise en cause" iDKaYP, Le secret professionnel, Brussel, La Charte, 2002, 123-125.
12. Sidhom MA, Poulsen MG. Multidisciplinary care in oncology: medicolegal implications of group decisions. *Lancet Oncol.* 2006;7(11):951-4.
13. Studdert DM. Can liability rules keep pace with best practice? The case of multidisciplinary cancer care. *Med J Aust.* 2008;188(7):380-1.
14. Plan Cancer. Plan Cancer, État des lieux, Novembre 2012 [Web page].2012. Available from: [http://www.laurette-onkelinx.be/articles\\_docs/20121127\\_-\\_Etat\\_des\\_lieux\\_Plan\\_Cancer.pdf](http://www.laurette-onkelinx.be/articles_docs/20121127_-_Etat_des_lieux_Plan_Cancer.pdf)
15. Fondation contre le cancer. Proceedings of "Le métier de coordinateur de soins en oncologie, rencontre interprofessionnelle" 2013.
16. Belgian Cancer Registry. Cancer Incidence in Belgium, 2008. Brussels: 2011.
17. Belgian Cancer Registry. Cancer data, incidence 2011 [Web page].2014. Available from: [http://www.kankerregister.org/Les\\_chiffres\\_du\\_cancer](http://www.kankerregister.org/Les_chiffres_du_cancer)
18. Multidisciplinary cancer care. Literature review. Melbourne: 2012. Available from: [www.health.vic.gov.au/cancer](http://www.health.vic.gov.au/cancer)
19. Saini KS, Taylor C, Ramirez AJ, Palmieri C, Gunnarsson U, Schmoll HJ, et al. Role of the multidisciplinary team in breast cancer management: results from a large international survey involving 39 countries. *Ann Oncol.* 2012;23(4):853-9.
20. Devitt B, Philip J, McLachlan S-A. Team dynamics, decision making, and attitudes toward multidisciplinary cancer meetings: health professionals' perspectives. *J Oncol Pract.* 2010;6(6):e17-20.
21. Haute Autorité de Santé (HAS). Réunion de concertation pluridisciplinaire en cancérologie. 2006.
22. Wright FC, De Vito C, Langer B, Hunter A, Expert Panel on Multidisciplinary Cancer Conference S. Multidisciplinary cancer conferences: a systematic review and development of practice standards. *Eur J Cancer.* 2007;43(6):1002-10.
23. Expert Advisory Group on Cancer. A Policy Framework for Commissioning Cancer Services: A Report to the Chief Medical Officers of England and Wales. London, UK: 1995.
24. Fleissig A, Jenkins V, Catt S, Fallowfield L. Multidisciplinary teams in cancer care: are they effective in the UK? *Lancet Oncol.* 2006;7(11):935-43.
25. Taylor C, Munro AJ, Glynne-Jones R, Griffith C, Trevatt P, Richards M, et al. Multidisciplinary team working in cancer: what is the evidence? *BMJ.* 2010;340:c951.
26. Kesson EM, Allardice GM, George WD, Burns HJG, Morrison DS. Effects of multidisciplinary team working on breast cancer survival: retrospective, comparative, interventional cohort study of 13 722 women. *BMJ.* 2012;344:e2718.
27. MacDermid E, Hooton G, MacDonald M, McKay G, Grose D, Mohammed N, et al. Improving patient survival with the colorectal cancer multi-disciplinary team. *Colorectal Dis.* 2009;11(3):291-5.
28. Forrest LM, McMillan DC, McArdle CS, Dunlop DJ. An evaluation of the impact of a multidisciplinary team, in a single centre, on treatment and survival in patients with inoperable non-small-cell lung cancer. *Br J Cancer.* 2005;93(9):977-8.
29. Westin T, Stalfors J. Tumour boards/multidisciplinary head and neck cancer meetings: are they of value to patients, treating staff or a political additional drain on healthcare resources? *Curr Opin Otolaryngol Head Neck Surg.* 2008;16(2):103-7.
30. Junor EJ, Hole DJ, Gillis CR. Management of ovarian cancer: referral to a multidisciplinary team matters. *Br J Cancer.* 1994;70(2):363-70.
31. Murray PV, O'Brien MER, Sayer R, Cooke N, Knowles G, Miller AC, et al. The pathway study: results of a pilot feasibility study in patients suspected of having lung carcinoma investigated in a conventional chest clinic setting compared to a centralised two-stop pathway. *Lung Cancer.* 2003;42(3):283-90.



32. Martin-Ucar AE, Waller DA, Atkins JL, Swinson D, O'Byrne KJ, Peake MD. The beneficial effects of specialist thoracic surgery on the resection rate for non-small-cell lung cancer. *Lung Cancer*. 2004;46(2):227-32.
33. Back MF, Ang ELL, Ng W-H, See S-J, Lim CCT, Tay L-L, et al. Improvements in quality of care resulting from a formal multidisciplinary tumour clinic in the management of high-grade glioma. *Ann Acad Med Singapore*. 2007;36(5):347-51.
34. Boxer MM, Vinod SK, Shafiq J, Duggan KJ. Do multidisciplinary team meetings make a difference in the management of lung cancer? *Cancer*. 2011;117(22):5112-20.
35. Lamb B, Green JSA, Vincent C, Sevdalis N. Decision making in surgical oncology. *Surg Oncol*. 2011;20(3):163-8.
36. Lamb BW, Brown KF, Nagpal K, Vincent C, Green JSA, Sevdalis N. Quality of care management decisions by multidisciplinary cancer teams: a systematic review. *Ann Surg Oncol*. 2011;18(8):2116-25.
37. Haward R, Amir Z, Borrill C, Dawson J, Scully J, West M, et al. Breast cancer teams: the impact of constitution, new cancer workload, and methods of operation on their effectiveness. *Br J Cancer*. 2003;89(1):15-22.
38. Kidger J, Murdoch J, Donovan JL, Blazeby JM. Clinical decision-making in a multidisciplinary gynaecological cancer team: a qualitative study. *BJOG*. 2009;116(4):511-7.
39. Lanceley A, Savage J, Menon U, Jacobs I. Influences on multidisciplinary team decision-making. *Int J Gynecol Cancer*. 2008;18(2):215-22.
40. Stalfors J, Lundberg C, Westin T. Quality assessment of a multidisciplinary tumour meeting for patients with head and neck cancer. *Acta Otolaryngol*. 2007;127(1):82-7.
41. Landheer ML, Therasse P, van de Velde CJ. The importance of quality assurance in surgical oncology in the treatment of colorectal cancer. *Surg Oncol Clin N Am*. 2001;10(4):885-914.
42. Quirke P. Training and quality assurance for rectal cancer: 20 years of data is enough. *Lancet Oncol*. 2003;4(11):695-702.
43. Pawlik TM, Laheru D, Hruban RH, Coleman J, Wolfgang CL, Campbell K, et al. Evaluating the impact of a single-day multidisciplinary clinic on the management of pancreatic cancer. *Ann Surg Oncol*. 2008;15(8):2081-8.
44. Wheless SA, McKinney KA, Zanation AM. A prospective study of the clinical impact of a multidisciplinary head and neck tumor board. *Otolaryngol Head Neck Surg*. 2010;143(5):650-4.
45. Davies AR, Deans DAC, Penman I, Plevris JN, Fletcher J, Wall L, et al. The multidisciplinary team meeting improves staging accuracy and treatment selection for gastro-esophageal cancer. *Dis Esophagus*. 2006;19(6):496-503.
46. Stephens MR, Lewis WG, Brewster AE, Lord I, Blackshaw GRJC, Hodzovic I, et al. Multidisciplinary team management is associated with improved outcomes after surgery for esophageal cancer. *Dis Esophagus*. 2006;19(3):164-71.
47. Conron M, Phuah S, Steinfort D, Dabscheck E, Wright G, Hart D. Analysis of multidisciplinary lung cancer practice. *Intern Med J*. 2007;37(1):18-25.
48. Vinod SK, Sidhom MA, Delaney GP. Do multidisciplinary meetings follow guideline-based care? *J Oncol Pract*. 2010;6(6):276-81.
49. Caudron A, Chaby G, Dadban A, Andrejak C, Dhaille F, Bagot M, et al. Multidisciplinary team meetings in Oncology: first analysis of benefits and evaluation of activity in a Dermatology unit in France. *Eur J Dermatol*. 2010;20(6):778-84.
50. Shulman T, Bain C, Raikundalia GK, Sharma R. Obstacles to Sustaining Cancer Care Multidisciplinary Team Meetings: An Australian Survey. *Research In Cancer and Tumor*. 2013;2(1):12.
51. Burton S, Brown G, Daniels IR, Norman AR, Mason B, Cunningham D, et al. MRI directed multidisciplinary team preoperative treatment strategy: the way to eliminate positive circumferential margins? *Br J Cancer*. 2006;94(3):351-7.
52. Rajasekaran AB, Silvey D, Leung B, Honeybourne D, Cayton RM, Reynolds J, et al. Effect of a multidisciplinary lung investigation day on a rapid access lung cancer service. *Postgrad Med J*. 2006;82(968):414-6.



53. Bjegovich-Weidman MH, M.; Kumar, S.; Huibregtse, C.; McDonald, J.; Krishnan, S. Establishing a community-based lung cancer MD clinic as part of a large integrated health care system: Aurora Health Care. *J Oncol Practice*. 2010;6(6):4.
54. Ruhstaller T, Roe H, Thurlimann B, Nicoll JJ. The multidisciplinary meeting: An indispensable aid to communication between different specialities. *Eur J Cancer*. 2006;42(15):2459-62.
55. Petrelli NJ, Grusenmeyer PA. Establishing the multidisciplinary care of patients with cancer in the state of Delaware. *Cancer*. 2004;101(2):220-5.
56. Bouvier A-M, Bauvin E, Danzon A, Grosclaude P, Delafosse P, Buemi A, et al. Place of multidisciplinary consulting meetings and clinical trials in the management of colorectal cancer in France in 2000. *Gastroenterol Clin Biol*. 2007;31(3):286-91.
57. Carter S, Garside P, Black A. Multidisciplinary team working, clinical networks, and chambers; opportunities to work differently in the NHS. *Qual Saf Health Care*. 2003;12 Suppl 1:i25-8.
58. Hammond DB. Multidisciplinary cancer care in a community hospital setting: challenges and rewards. *J Oncol Pract*. 2010;6(6):281-3.
59. Gabel M, Hilton NE, Nathanson SD. Multidisciplinary breast cancer clinics. Do they work? *Cancer*. 1997;79(12):2380-4.
60. Patkar V, Acosta D, Davidson T, Jones A, Fox J, Keshtgar M. Cancer multidisciplinary team meetings: evidence, challenges, and the role of clinical decision support technology. *Int J Breast Cancer*. 2011;2011:831605.
61. Kane B, Luz S, O'Briain DS, McDermott R. Multidisciplinary team meetings and their impact on workflow in radiology and pathology departments. *BMC Med*. 2007;5:15.
62. Hong NJL, Wright FC, Gagliardi AR, Brown P, Dobrow MJ. Multidisciplinary cancer conferences: exploring the attitudes of cancer care providers and administrators. *J Interprof Care*. 2009;23(6):599-610.
63. Walsh J, Harrison JD, Young JM, Butow PN, Solomon MJ, Masya L. What are the current barriers to effective cancer care coordination? A qualitative study. *BMC Health Serv Res*. 2010;10:132.
64. Lamb BW, Sevdalis N, Arora S, Pinto A, Vincent C, Green JSA. Teamwork and team decision-making at multidisciplinary cancer conferences: barriers, facilitators, and opportunities for improvement. *World J Surg*. 2011;35(9):1970-6.
65. Beraadslaging nr 09/071 van 15 september 2009 met betrekking tot de mededeling van persoonsgegevens door de verzekeringsinstellingen aan de Stichting Kankerregister in het kader van artikel 45 quinquies van het KB nr 78 van 10 november 1967 betreffende de uitoefening van de gezondheidsberoepen / Délibération n°09/071 du 15 septembre 2009 relative à la communication de données à caractère personnel par les organismes assureurs à la Fondation Registre du Cancer dans le cadre de l'article 45quinquies de l'AR n°78 du 10 novembre 1967 relatif à l'exercice des professions des soins de santé. In.
66. International Statistical Classification of Diseases and Related Health Problems. 2010.
67. Fritz A PC, Jack A et al. International Classification of Diseases for Oncology (ICD-O-3). In. Geneva, WHO, 2000.
68. Sobin L, Wittekind CH. TNM Classification of malignant tumours, International Union Against Cancer 6th edition (UICC). New York, Wiley-liss; 2002.
69. Sobin LH WC, Gospodarowicz MK. TNM Classification of Malignant Tumours, International Union Against Cancer 7th edition. Wiley-liss; 2009.
70. Monaco. Backgr Notes Ser. 1985:1-4.
71. Billiet J, Carton A. Dataverzameling: gestandaardiseerde interviews en zelf-in-te-vullen vragenlijsten. In: H. BJW, editor. Een samenleving onderzocht: methoden van sociaal-wetenschappelijk onderzoek. Antwerpen: De Boeck; 2003. p. 285-314.
72. Claeys D. Verslag Ministerieel project Videoconferencing & Telemoc. In: AZ maria Middelares; 2014.



73. Meeus P, Van Aubel X. Performance de la médecine générale, bilan de santé. Bruxelles, Institut national d'assurance maladie-invalidité (INAMI). 2012.
74. Valentijn PP, Schepman SM, Opheij W, Bruijnzeels MA. Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. *Int J Integr Care*. 2013;13:e010.
75. Donabedian A. Evaluating the quality of medical care. 1966. *Milbank Q*. 2005;83(4):691-729.
76. Johansen ML, Holtedahl KA, Rudebeck CE. A doctor close at hand: How GPs view their role in cancer care. *Scand J Prim Health Care*. 2010;28(4):249-55.
77. Roorda C, de Bock GH, van der Veen WJ, Lindeman A, Jansen L, van der Meer K. Role of the general practitioner during the active breast cancer treatment phase: an analysis of health care use. *Support Care Cancer*. 2012;20(4):705-14.
78. Look Hong NJ, Gagliardi AR, Bronskill SE, Paszat LF, Wright FC. Multidisciplinary cancer conferences: exploring obstacles and facilitators to their implementation. *J Oncol Pract*. 2010;6(2):61-8.
79. Lamb BW, Brown KF, Nagpal K, Vincent C, Green JS, Sevdalis N. Quality of care management decisions by multidisciplinary cancer teams: a systematic review. *Ann Surg Oncol*. 2011;18(8):2116-25.
80. Gilbert J. Framework for action on Interprofessional Education & Collaborative Practice. 2010.
81. Reeves S, Perrier L, Goldman J, Freeth D, Zwarenstein M. Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database Syst Rev*. 2013;3:Cd002213.
82. De Moitié E. Continuïteit in de palliatieve thuiszorg door de huisarts: organisatie van palliatieve zorg na de werkuren - Masterscriptie. 2011.
83. Devitt B, Philip J, McLachlan SA. Team dynamics, decision making, and attitudes toward multidisciplinary cancer meetings: health professionals' perspectives. *J Oncol Pract*. 2010;6(6):e17-20.
84. Dahlhaus A, Vanneman N, Guethlin C, Behrend J, Siebenhofer A. German general practitioners' views on their involvement and role in cancer care: a qualitative study. *Family Practice*. 2014;31(2):209-14.
85. Geelen E, Krumeich A, Schellevis FG, van den Akker M. General practitioners' perceptions of their role in cancer follow-up care: A qualitative study in the Netherlands. *Eur J Gen Pract*. 2014;20(1):17-24.
86. Penel N, Valentin F, Giscard S, Vanseymortier L, Beuscart R. General practitioners assessment of a structured report on medical decision making by a regional multidisciplinary cancer committee. *Bull Cancer*. 2007;94(10):E23-6.
87. Debono D. Coping with the oncology workforce shortage: transitioning oncology follow-up care to primary care providers. *J Oncol Pract*. 2010;6(4):203-5.
88. Berendsen AJ, Kuiken A, Benneker WH, Meyboom-de Jong B, Voorn TB, Schuling J. How do general practitioners and specialists value their mutual communication? A survey. *BMC Health Serv Res*. 2009;9:143.

