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on Aortic Diseases

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High Prevalence of Abdominal Aortic Aneurysm in Patients with 3-vessel Coronary Artery Disease

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Background

- Epidemiological screening studies suggest an association between AAA and atherosclerosis (CAD, PAD)
- Prevalence of AAA in patients with CAD is not clearly known
- Recent studies suggest a decrease in the prevalence of AAA in the general population
- Prospective study in patients undergoing coronary angiography



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Materiel and Methods

- Patients undergoing coronary angiography for known or suspected CAD or prior to valve surgery (march 2009 → August 2010)
- Patients with known AAA or with previous replacement of the abdominal aorta for AAA were included
- Ultrasonographic examination of the infrarenal aorta (single examiner)
- Diagnosis of AAA based on an anteroposterior diameter \geq 30 mm



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Results and discussion

Patients undergoing coronary angiography
1027 patients

21 patients refused

Aorta not visualized in 6 patients

1000 patients included

699 men

301 women

41 AAA (5.9%)

1 AAA (0.3%)

Overall prevalence
of AAA
4.2%
(42/1000)



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Results and discussion

- 42 patients with AAA



newly diagnosed in 19 patients

already known in 13 patients

previously repaired in 10 patients

Distribution of known and discovered AAA according to size and age

AAA maximum diameter	Number of patients			
	Discovered AAA (N=19)		Known AAA (N=13)	
	< 65 years	≥ 65 years	< 65 years	≥ 65 years
< 40 mm	6	10	3	2
≥ 40 mm and < 55 mm	0	1	2	2
≥ 55mm	0	2	1	3



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Results and discussion

Characteristic	All patients (N=1000)	No AAA (N=958)	AAA (N=42)	Univariate analysis	Multivariate analysis
Age (years)	64 ± 11.6	63.8 ± 11.6	70.3 ± 8.94	< 0.001	
Age ≥ 65	490 (49%)	462(48.2%)	28 (66.7%)	0.007	0.003
Male gender	699 (69.9%)	658 (68.7%)	41 (97.6%)	0.004	0.005
Family history	79 (7.9%)	73 (7.6%)	6 (14.3%)	0.12	0.01
Smoker ever				0.03	0.005
Past smoker	434 (43.4%)	414 (43.2%)	20 (47.6%)		0.22
Current smoker	269 (26.9%)	252 (26.3%)	17 (40.5%)		0.003
Coronary profile				<0.0001	<0.0001
No significant lesion (%)	267 (26.7%)	263 (27.5%)	4 (9.5%)		
1 vessel disease (%)	361 (36.1%)	350 (36.5%)	11 (26.2%)		0.47
2 vessel disease (%)	238 (23.8%)	228 (23.8%)	10 (23.8%)		0.18
3 vessel disease (%)	134 (13.4%)	117 (12.2%)	17 (40.5%)		<0.001
Mean number of affected coronary arteries	1.2 ± 1	1.2 ± 1	2 ± 1	<0.0001	
Mean aortic diameter (mm) *	18.1 ± 6.02	17.3 ± 3.50	41.9 ± 13.2	-	-

* after exclusion of the 10 patients with previous AAA repair



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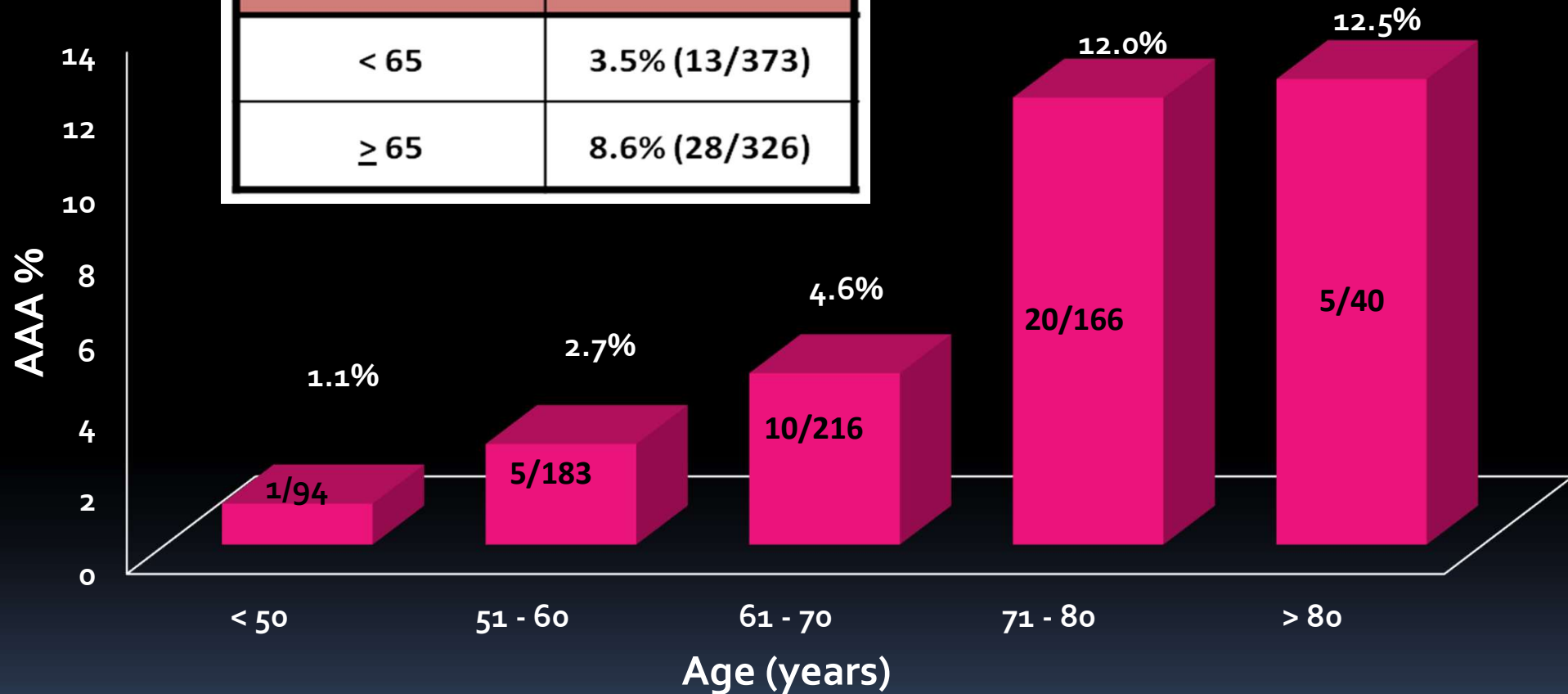
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Results and discussion

Prevalence of AAA according to age in male patients

Age (years)	AAA, % (n/N)
< 65	3.5% (13/373)
≥ 65	8.6% (28/326)

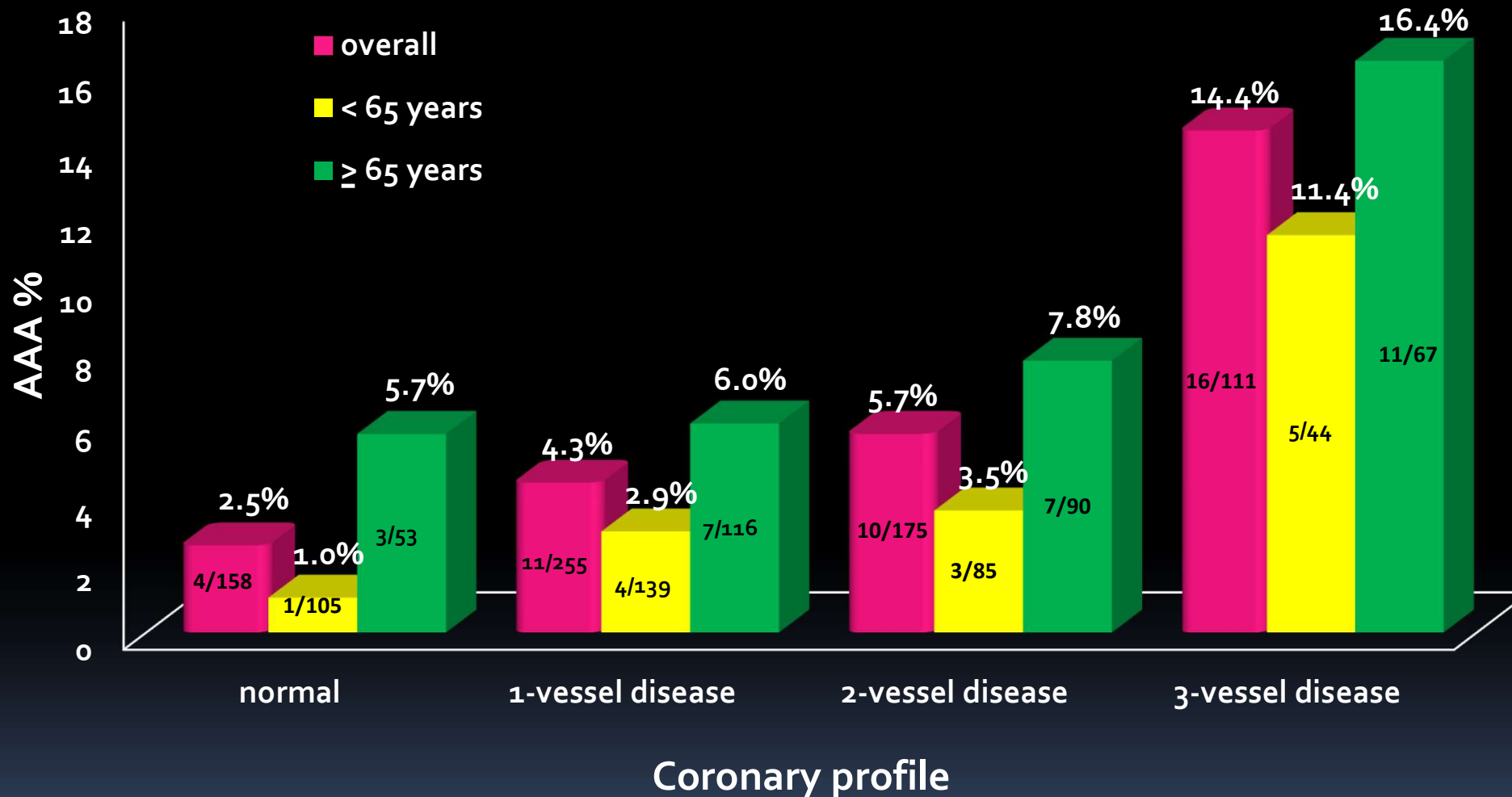


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Results and discussion

Prevalence of AAA according to the coronary profile and age in male patients



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Conclusion

- In our selected population, the prevalence of AAA was high in male patients aged 65 or over (8.6%) and in those with a three-vessel CAD (12.7%) regardless of age or cardiovascular risk factors
- Given these results, we recommend routine screening for these groups
- Long term follow-up and cost-benefit evaluation are required to provide clear evidence for this recommendation in general medical practice



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Thank you for your attention



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