- D07 -

State-of-the-art Lecture

The role of the gut microbiome in gastrointestinal and liver disease.

N. Delzenne, UCL, Belgium.

- D08 -

PROGNOSTIC VALUE OF FDG PET/CT IN LIVER TRANSPLANTATION FOR HEPATOCARCINOMA.

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Aim : FDG uptake has been shown to predict the outcome in large series of patients with hepatocarcinoma (HCC) in Asia, but few data are available regarding European populations. Our aim was to evaluate the prognostic value of pre-treatment FDG PET-CT in patients treated by liver transplantation.

Methods : We retrospectively analyzed the data of 27 patients (24 M and 3 W, mean age 58 ± 9 years). The mean follow-up was 26 ± 18 months (min 1 month, max 66 months). All patients had an FDG PET-CT before the transplantation. The FDG PET/CT was performed according to a standard clinical protocol : 4 MBqFDG/kg body weight, uptake 60 min., low-dose non-enhanced CT. We measured the SUVmax and SUVmean of the tumor and the normal liver. The tumor/liver activity ratios (RSUVmax and RSUVmean) were tested as prognostic factors and compared to the following conventional prognostic factors : MILAN, CLIP, OKUDA, TNM stage, alphafoetoprotein level, portal thrombosis, size of the largest nodule, tumor differentiation, microvascular invasion, underlying cirrhosis and liver function.

Results : The DFS was 87.2% at 1y and 72.1% at 3y. The OS was 85.2% at 1y and 80.7% at 3y. According to an univariate Cox model, RSUVmax, RSUVmean and healthy liver were predictors of DFS and RSUVmax, RSUVmean, size of the largest nodule, CLIP, liver involvement > 50%, and healthy liver predicted the OS. According to a multivariate Cox model, only RSUVmax predicted DFS and RSUVmax and liver involvement > 50% predicted OS. An ROC analysis of the ratios showed that the 1.15 cut-off for RSUVmax was best for predicting both the DFS (Cox regression : HR 14.4, $p = 0.02$) and OS (HR 5.6, $p = 0.049$). The Kaplan-Meier curves and Logrank tests confirmed those results. Even though the MILAN criteria alone were not predictive, it is worth noting that none of the patients outside the MILAN criteria and with RSUVmax < 1.15 relapsed.

Conclusions : The RSUVmax is a strong prognostic factor for recurrence and death in patients with HCC treated by liver transplantation with a cut-off value of 1,15. further prospective studies should test whether the metabolic index should be systematically included in the preoperative assessment.

- D09 -

PREOP. CHEMOSENSITIVITY TESTING AS PREDICTOR OF ADJUVANT BENEFIT IN STAGE III COLON CANCER (PEPITA).

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Introduction : Adjuvant chemotherapy improves stage III colon cancer outcome but is not effective for all patients. PePiTA trial's main hypothesis is that the absence of metabolic response of the primary tumor after 1 preoperative chemotherapy course predicts the absence of benefit from adjuvant chemotherapy (at 3-year DFS). This strategy's aim is to spare patients from useless toxicities, improve healthcare resource allocation, and guide translational research. This interim analysis was performed for safety and feasibility of Metabolic Response Assessment (MRA).

Methods : Patients ≥ 18 years, with PS ≤ 1, diagnosed with colon cancer considered for curative resection are eligible, after signed consent. Baseline PET is repeated after 1 chemotherapy cycle, followed by surgery. PET quality insurance and MRA are performed centrally and the result is blinded for investigators.