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40 **Whole Body F-18-FDG-PET for the Preoperative Evaluation of Patients with Primary and Secondary Liver Tumors**

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We have prospectively evaluated the importance of F-18-FDG-PET in primary and secondary liver tumors compared with CT, MRI and sonography. Extension of liver resection in primary and secondary liver tumors depends on tumor location and extrahepatic tumor manifestation.

Methods:

In all patients whole body FDG-PET (ECAT EXACT 47, Siemens/CTI) in a routine protocol, MRI (abdomen), CT (abdomen) and sonography (abdomen) were performed preoperatively. The interpretation of the attenuation corrected studies of the 50 patients occurred blindly.

Results:

	all cases (n=174)					colorectal ca. (n=74)					hepatocellular ca. (n=34)				
	TP	FN	TN	FP	sens	TP	FN	TN	FP	sens	TP	FN	TN	FP	sens
sonography	105	61	4	4	63,3	63	10	1	0	86,3	19	12	0	6	61,3
CT	118	48	4	4	71,1	64	9	0	1	87,7	25	6	2	4	80,6
MRI(23 pat)	94	19	4	3	83,2	42	4	0	0	91,3	24	3	4	2	88,9
FDG-PET	137	29	2	6	82,5	69	4	0	1	94,5	16	15	1	5	51,6

Conclusion:

A whole body FDG-PET is an efficient method for preoperative staging in primary and secondary liver tumors. It is a helpful tool for the surgeon in preparing the surgical procedure.



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45 **A Comparison of Dedicated and Hybrid PET Imaging in Detection of Recurrences of Colorectal Cancer with [18F]-FDG**

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Aim: The aim of this study was to assess the clinical performances of FDG using a CDET system (hybrid dual-head MARCONI gamma camera with sodium iodine crystal 19 mm thick) or a dedicated PET system (C-PET, ADAC) for the detection of colorectal cancer recurrences. We report an experience of 4 years with CDET (July 1997 - July 2001) and of 1.5 years with PET (January 2000 - July 2001).

Methods: After fasting for 6h or more, 3-5 MBq/kg (for 2D - CDET) or 2 MBq/kg (for 3D - PET) of [18F]-FDG were injected i.v. and imaging (whole-body scan and at least one tomoscintigram for CDET or scanning of the torso for PET) was started one hour later. Reconstruction was performed by an iterative algorithm. Attenuation correction by an external source was only available for PET.

ABSTRACTS

304 examinations (ex) were performed with CDET and 164 with PET. 230 CDET cases and 73 PET cases are currently evaluable according to histology or to follow-up. These examinations were performed for suspicion of recurrence (157 CDET cases, 39 PET cases), in search for other localisations when one or more resectable lesion(s) was (were) known (48 CDET cases, 24 PET cases) or for evaluation of the therapeutic efficacy (25 CDET cases, 10 PET cases).

Results: The results were the following, on patient-basis :

	Suspicion of recurrence	Search for other localisations	Therapeutic evaluation
CDET	104 TP ; 30 TN 3 FP ; 20 FN	48 TP ; 0 TN 0 FP ; 0 FN	11 TP ; 13 TN 0 FN ; 1 FN
PET	30 TP ; 5 TN 0 FP ; 4 FN	23 TP ; 0 TN 0 FP ; 1 FN	5 TP ; 5 TN 0 FP ; 0 FN

Globally, sensitivity was 89% with CDET and 92% with PET, specificity was 93% with CDET and 100% with PET and accuracy was 90% with CDET and 93% with PET.

Conclusion: These results confirmed that FDG is a powerful tool for the detection of colorectal recurrences and showed that no significant difference in accuracy ($\chi^2 = .75$; $p = .4$) was detectable between the two modalities interpreted by the same team and both performed 1 hour after injection.

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Modification of Patient Management when Using FDG-PET in Detection of Recurrences of Colorectal Cancer: 18 Month-Experience

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Aim: The aim of this study was to evaluate the impact of [F-18] - FDG - PET on managing patients with colorectal cancer.

Methods: From January 2000 to July 2001, 164 examinations were performed by the team of hospital Tenon using a 3D dedicated PET system (C-PET, ADAC) for suspicion or recurrence of colorectal cancer (53 % of the cases), for search for other localisations when one or more resectable(s) lesion(s) was (were) known (37 %) or for evaluation of the therapeutic efficacy (10 %).

To evaluate the impact of PET imaging on patient management, a post PET questionnaire (corresponding to the french translation of the questionnaire presented by J. Meta et al., J Nucl Med, 2001, 42, 586-590) was sent to the referring physician.

Results: 94 responses are currently available, corresponding to:

- no change (n = 42),
- change from no treatment to surgery (n = 11),
- change from no treatment to medical treatment (n = 11),
- change from surgery to medical treatment (n = 9),
- change from medical treatment to no treatment (n = 5),