

PTU-006 **FDG-PET ORIENTED SURGERY FOR RECURRENT
COLORECTAL CANCER**

doi:10.1136/gut.2011.239301.134

H Ishikawa,* A Watanabe, T Mukogawa, T Inoue, S Nishiwada, T Kunishige, S Ko *Department of Surgery, Nara Prefectural Nara Hospital, Nara city, Japan*

Introduction Fluorine-18 fluorodeoxyglucose positron emission tomography (FDG-PET) has been accepted as an effective tool of diagnosis and staging for patients with known or suspected recurrent colorectal cancer.

Methods This study is to analyze the clinical significance of FDG-PET on the diagnosis and indication of surgical intervention for recurrent colorectal cancer. Consecutive 48 patients,

with known or suspected recurrence of colorectal cancer based on elevation of tumour markers or abnormal findings on the follow-up CT image, underwent FDG-PET for 70 times between December 2003 and August 2009. Patients were aged between 35 and 89 years (median 48); 27 were male, 16 were Duke's A or B stage, and 26 had a history of colon cancer. The average of recurrence was two times (range 1–6). The average period between operation and first FDG-PET was 25 months (range 1–89). Of 48 cases 42 had elevated serum CEA or CA19-9 (91.3%). For each case the diagnosis of FDG-PET image was compared with that of CT image and the final diagnosis.

Results 48 patients were divided into these three groups according to the purposes of FDG-PET; to identify recurrent colorectal cancer by FDG-PET (identification group, n=5), to determine malignancy and disease spread (disease spreading group, n=37), and to evaluate the possibility of surgical intervention in recurrence-confirmed cases (follow-up group, n=6). In the identification group, FDG-PET solely could identify recurrence and indicate operation for 4 cases (7 times). One of three cases shows disease-free survival for 33 months after common iliac replacement operation. In the disease spreading group, 23 cases with localised disease spread by FDG-PET findings were indicated operation, 14 cases with diffused disease spread were judged as contraindication of operation. The median survival period after recurrence of operation series was longer than that of contraindication series (36 months vs 22 months). In the follow-up group, FDG-PET could detect lesions of whole body at one study and one was indicated for salvage operation for liver metastasis. FDG-PET showed to be false-positive in one case and false-negative in three. Totally, the sensitivity of FDG-PET was 95.7% and its accuracy was 94.2%, whereas those of CT were 87.1% and 87.1%, respectively.

Conclusion FDG-PET could visualise a malignant lesions at earlier stage, and was an effective modality to evaluate not only disease spread but distant metastasis for recurrence of colorectal cancer. In this study, we first demonstrated that FDG-PET oriented surgical indication has clinical importance for recurrent colorectal cancer.

Competing interests None.

Keywords FDG-PET, recurrence.