

## The Value of <sup>18</sup>F-FDG-PET/CT in Patients with Resectable Pancreatic Cancer: A Prospective Study

Stefano Crippa, Matteo Salgarello, Silvia Laiti, Stefano Partelli,  
Giuliano Barugola, Paola Castelli, Giuseppe Zamboni, Massimo Falconi

Departments of Surgery, Nuclear Medicine and Pathology, “Sacro Cuore – Don Calabria” Hospital.  
Negrar, VR, Italy

**Context** Whole-body <sup>18</sup>F-fluor-deoxyglucose positron emission tomography/computed tomography (<sup>18</sup>F-FDG-PET/CT) has emerged as a promising diagnostic modality in different tumors. The role and the utility of <sup>18</sup>F-FDG-PET/CT in resectable pancreatic cancer is debated. **Objective** To assess prospectively the value of <sup>18</sup>F-FDG-PET/CT in addition to conventional imaging as a staging modality in candidates for resection of resectable pancreatic cancer. **Methods** Whole-body <sup>18</sup>F-FDG-PET/CT was performed in 65 patients with pancreatic ductal adenocarcinoma who were judged resectable at high-resolution imaging. Neoadjuvant therapy was performed in the 20% of cases. Maximum standardized uptake value (SUV<sub>max</sub>) was evaluated 60 and 250 minutes after FDG injection. **Results** Eight out of 65 (12%) patients were spared unwarranted resection since <sup>18</sup>F-FDG-PET/CT detected synchronous advanced lung cancer (n=1) or metastatic disease (n=7). Median CA 19-9 was 53 kU/L for the entire cohort and 291 kU/L for seven patients with metastases (P=0.005). In other two patients <sup>18</sup>F-FDG-PET/CT identified one colon carcinoma and a thoracic

neurinoma. Thirteen out of 65 (20%) patients had low metabolic activity (SUV<sub>max</sub><3), and 46% of these patients had undergone neoadjuvant treatment (P=0.008). At laparotomy 3/57 (5%) patients did not undergo resection because of locally-advanced (n=1) or metastatic disease (n=2). Fifty-four patients underwent pancreatic resections associated with 11 (20%) vascular resections and one left colectomy. N1 rate was 76%, with a median of 33 resected nodes. In 8/54 (15%) patients <sup>18</sup>F-FDG-PET/CT identified metastatic lymph nodes that required an extension of lymphadenectomy. Sensitivity and specificity of <sup>18</sup>F-FDG-PET/CT for the detection of metastatic disease were 80% and 100%, respectively. **Conclusion** <sup>18</sup>F-FDG-PET/CT findings resulted in changes of therapeutic management/operative procedures in one third of patients. <sup>18</sup>F-FDG-PET/CT improves staging of patients with resectable pancreatic cancer. Neoadjuvant treatment is significantly associated with low metabolic activity limiting the value of <sup>18</sup>F-FDG-PET/CT in this setting.