

Tailoring therapy in colorectal cancer by PET-CT

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Positron emission tomography (PET) using [(18)F]-fluoro-2'-deoxy-D-glucose (FDG) has an added value in the clinical management of patients with colorectal carcinoma (CRC). This includes restaging patients before surgical resection or local recurrence of liver metastases, assessment whether residual lesions are scar or recurrence and in pinpointing recurrence in case of unexplained increase in serum levels of carcinoembryonic antigen. At present, there is an increasing interest in new roles for FDG-PET, especially for characterization of lesions, for prognosis and response prediction and for early evaluation of treatment response to commenced therapy. FDG-PET may lead to better selection of patients for different therapeutic options or to early individual adjustment of current treatment. This systematic review aims to provide an up-to-date overview of literature on the current and potential value of FDG-PET in CRC patients by addressing staging and recurrence detection, prognosis and response prediction and evaluation of preoperative (chemo)radiotherapy for primary rectal carcinoma, ablative treatment for unresectable liver metastases and chemotherapy for advanced CRC.