

Breast recurrence of primary rectal lymphoma: documentation by ^{18}F -FDG-PET and histopathology

To the Editor: A 56 years old female, with non-Hodgkin's diffuse large B cell lymphoma (DLBCL) of the rectum presented with classic symptoms, like loose watery stool and one episode of bleeding per rectum, before 8 months. A concentric mass involving the long segment of the rectum was diagnosed by CT. On trephine biopsy and bone marrow aspiration from the posterior iliac crest, there was no bone marrow involvement. The patient underwent 6 cycles of chemotherapy with rituximab, cyclophosphamide, doxorubicin (or adriamycin), vincristine and prednisolone (R-CHOP chemotherapy) followed by adjuvant involved field radiotherapy (IFRT). The IFRT was considered as an option because a fluorodeoxyglucose positron emission tomography (^{18}F -FDG-PET) scan performed after the first 4 cycles of chemotherapy had shown persistent viable disease at the site of the primary tumor. Another ^{18}F -FDG-PET scan (Fig 1A and 1B) performed 2 months after treatment demonstrated an irregular area of non-homogenous ^{18}F -FDG uptake in the rectum with maximum standardized uptake value (SUVmax) of 6.3, which persisted in the delayed dual time point imaging and an area of intense uptake with SUVmax of 10.17 in the right breast, where on clinical examination, there was a palpable mass. Histopathol-

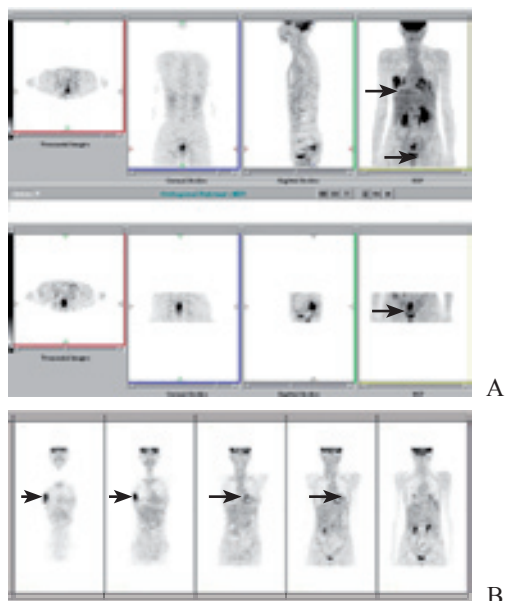


Figure 1A. (Upper panel): Whole body ^{18}F -FDG-PET scan acquired 60min after i.v. injection of 370MBq of ^{18}F -FDG, demonstrating focal abnormal uptake at the site of the rectum. An area of intense ^{18}F -FDG uptake in the region of the right breast is also noted at the MIP image of the upper panel (arrows). Delayed images, (lower panel) show persistence of focal uptake (arrow). **B.** The first 2 coronal slices demonstrate the right breast lesion showing avid ^{18}F -FDG uptake and the subsequent three coronal slices show ^{18}F -FDG uptake at the left thoracic area. These foci could also suggest disease involvement though they were not biopsy proven.

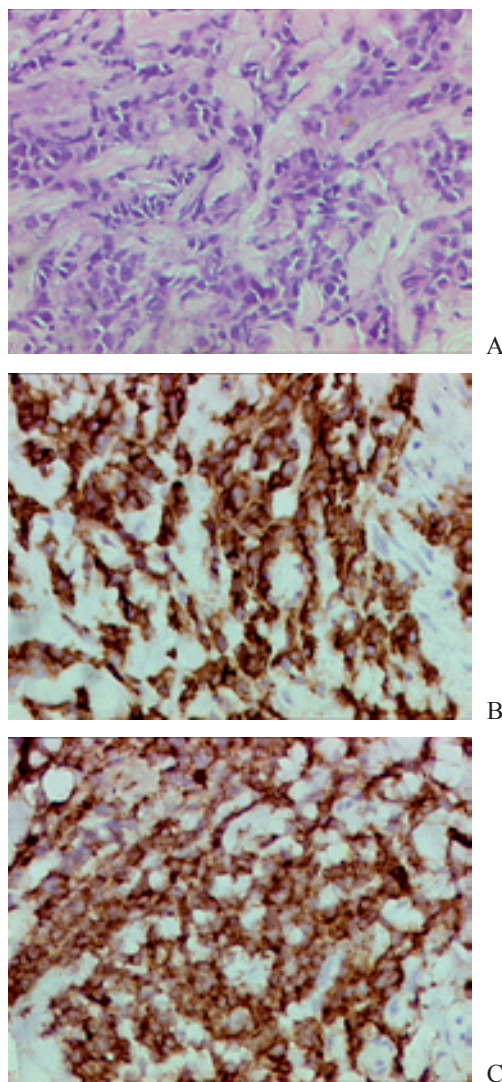


Figure 2. A. Biopsy from the right breast lesion of our patient showed high grade NHL with cells dissecting through the native fibrous stroma of the breast. (haematoxylin and eosin stain 20X). **B.** Diffuse large B-cell lymphoma biopsy from the breast lesion showing strong expression of leukocyte common antigen on immuno-histochemistry. **C.** Diffuse large B-cell lymphoma of the right breast in the same patient showing strong expression of cluster differentiation-20 on immuno-histochemistry.

ogy of the breast lesion suggested high grade non Hodgkin's lymphoma (NHL) compatible with the diagnosis of recurrence of DLBCL (Fig 2A). There was strong expression of leukocyte common antigen and cluster of differentiation-20 on immunohistochemistry (Fig 2B and 2C). Interestingly, the first ^{18}F -FDG-PET scan after 4 cycles of chemotherapy did not show any abnormal focus in that breast. Furthermore, the lesions at the left thoracic area were not investigated.

In certain previous reports published in this journal, the usefulness of ^{18}F -FDG-PET has been highlighted for lymphomas in other extranodal locations e.g. thyroid, spleen, adrenal and bilateral breasts at first diagnosis [1-5]. This case is presented to emphasize that whole body examination by ^{18}F -FDG-PET aided to diagnosis of an unsuspected metastasis in the right breast from DLBCL after chemotherapy.

Primary lymphoma of the rectum is a relatively rare entity and is usually of NHL type. The overall incidence is estimated to be 0.05%-0.1% of all primary rectal tumors [6]. The colorectal lymphomas comprise 10%-20% of gastrointestinal tract lymphomas in most series [7]. The appropriate management strategy between surgery, chemotherapy, radiotherapy and the sequence of combinations are debated.

In conclusion, we report a case of a primary rectal lymphoma with a proven metastasis in one breast following completion of chemoradiotherapy and documented by ^{18}F -FDG-PET and histopathology. The lesions shown in the left thorax were not investigated histopathologically.

The authors declare that they have no conflicts of interest.

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Eugene-Samuel Grasset (French-Swiss), 1897: Morphine addicted. Lithography