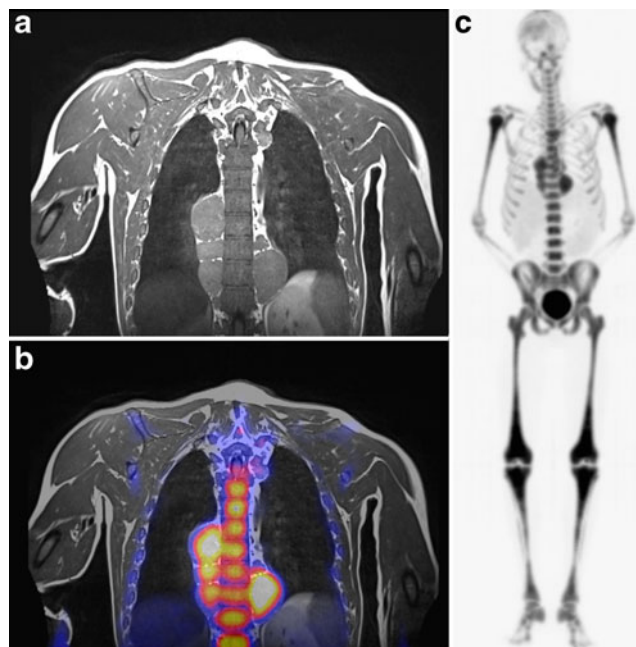


Extramedullary haematopoiesis imaging with ^{18}F -FLT PET

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A 40-year-old Caucasian man with a known history of haemoglobin E/ β -thalassaemia presented to our department with progressive back pain referred to both limbs, disturbed sensibility and weakness. Due to persisting physical complaints MRI of the thorax was performed (a), showing a bilateral paravertebral mass. The combination of the mass configuration and a patient with β -thalassaemia gives the presence of extramedullary haematopoiesis (EMH) a high ranking in the differential diagnosis, but malignant lymphoma could not be excluded. $3'$ - ^{18}F -fluoro- $3'$ -deoxy-L-thymidine (^{18}F -FLT) is used to detect and assess the haematopoietic bone marrow activity and could be helpful for the diagnosis of EMH [1]. ^{18}F -FLT PET demonstrated bone marrow expansion to the distal parts of the skeleton, with homogeneous activity, and an elevated standardized uptake value (SUV_{max} of the spine 4.2; normal 3.7) in bone marrow, but decreased in liver and spleen compared to normal values [1]. Normally no ^{18}F -FLT activity is shown in the distal bones [1]. More importantly, ^{18}F -FLT PET revealed multiple bilateral and thoracic paravertebral EMH masses with an elevated SUV_{max} of 5 (c). For optimal delineation of the EMH mass ^{18}F -FLT PET was fused with MRI which demonstrated intense ^{18}F -FLT uptake in the paravertebral area of the thorax (b). Due to the observed findings a new bone marrow aspiration was performed which revealed hypercellularity



with erythroid hyperplasia as a result of persistent anaemia. The patient was treated with blood transfusions and hydroxyurea which provided considerable relief of his complaints.

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Conflicts of interest None.

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