

## Paget bone disease demonstrated on 18F fluorocholine PET/CT: A case report

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### CASO CLINICO

A 64 year's old man with a history prostate adenocarcinoma went to our clinical observation. He was affected also of autoimmune hypothyroidism. In jule 2019 he was subjected to radical prostatectomy for recent finding of prostate adenocarcinoma. At staging exams in June 20 19 it was found a hypercaptant structural alteration in the right iliac wing. In particular, the Total Body Bone Scan with 99mTechnetium-HDP documented the presence of focal hyperfixation of the radiopharmaceutical in correspondence with the right anterior superior iliac spine, the left iliac wing near synchondrosis and the posterolateral tract of the right IV rib: these findings are worthy of further tests since replacement genesis cannot be excluded. On jule 2019 a subsequent pelvis computed tomography documented in correspondence of the middle third of the right iliac wing osteostructural alteration in part oval lytic of the diameter of about 30 mm with thinning of the cortical bone suspected for secondary localization of disease. Another similar lithic alteration of the diameter of 11 mm is appreciated at the level of the ipsilateral sacral wing.

Blood tests showed normal renal function, calcemia 9.21 mg/dl, phosphoremia 2.16 mg/dl, total alkaline phosphatase and bone isoenzyme in the normal range, serum betacrosslaps in the normal range, vitaminD25OH 16 ng/ml. PTH was normal. Because of Prostatic Antigen PSA was equal to 0 after prostatectomy, in september patient therefore performed a positron emission tomography/computed tomography (PET/CT) with 18F-FMC that documented an increased fixation of the tracer which initially orientates for replacement genesis in correspondence with the osteostructural alteration reported to the computed tomography of jule 2019 in correspondence with the middle third of the right iliac wing. Medical examination was characterized by the absence of pain in the peritrocanteric site or at the level of the right iliac wing; absence of synovitis. In the suspicion of secondary injury versus other bone pathology, the orthopedist suggested a bone biopsy with histological finding of bone Paget (immunohistochemical staining performed CK AE1 / AE3 negative). On the basis of the histological examination, a diagnosis of Paget Bone Disease in the right iliac wing of the lithic variant was performed in the outcome of radical prostatectomy for adenocarcinoma. A single infusion of zoledronic acid 5 mg iv was scheduled, well tolerated

