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Aim/Introduction: To assess the utility of 68Ga-PSMA PET / CT studies in the clinical practice of patients with occult biochemical recurrence of prostate carcinoma, with negative or inconclusive radiological imaging and PET / CT 18F-Choline studies. **Materials and Methods:** Retrospective descriptive study. The first 10 patients with a history of prostate carcinoma, treated with curative intent and who had suspected biochemical recurrence with low PSA values (range: 0.04-2.35 ng / ml) were selected. Imaging, prostate ultrasound, CT, and / or pelvic MRI were negative, and all of them had negative or inconclusive 18F-Choline PET / CT. All patients were referred for a 68Ga-PSMA PET / CT. Protocol: Dose 2.2MBq / Kg. 20mg of furosemide at minute 15. Images from the skull to the proximal third to mid-thigh at 60 min . Late images at 3 hours if needed. **Results:** In 6 of the 10 patients (60%), the 68Ga-PSMA managed to locate the occult biochemical recurrence, and in all of them there were changes in the therapeutic attitude. In 3 of the patients (30%) 68Ga-PSMA was negative, and the vigilant attitude was continued with PSA controls and imaging studies according to the usual protocols. These patients had the lowest PSA values (less than 0.4). One of the 68Ga PSMA studies was inconclusive, reporting the presence of a dubious right iliac adenopathy. **Conclusion:** 68Ga-PSMA PET / CT allows early diagnosis, with low PSA values, of occult biochemical recurrence of prostate carcinoma, even in patients with negative 18F-choline PET / CT. The 68Ga-PSMA findings changed the therapeutic attitude in a significant proportion of patients. **References:** Comparison of PET imaging with a 68Ga-labelled PSMA ligand and 18F-choline-based PET/CT for the diagnosis of recurrent prostate cancer Ali Afshar-Oromieh, Christian M. Zechmann, Anna Malcher, Matthias Eder, Michael Eisenhut, Heinz G. Linhart, Tim Holland-Letz, Boris A. Hadaschik, Frederik L. Giesel, Jürgen Debus & Uwe Haberkorn European Journal of Nuclear Medicine and Molecular Imaging volume 41, pages11-20(2014)68Ga-PSMA PET/CT for restaging recurrent prostate cancer: which factors are associated with PET/CT detection rate? Francesco Ceci, Christian Uprimny, Bernhard Nilica, Llanos Geraldo, Dorota Kendler, Alexander Kroiss, Jasmin Bektic, Wolfgang Horninger, Peter Lukas, Clemens Decristoforo, Paolo Castellucci, Stefano Fanti & Irene J. Virgolini European Journal of Nuclear Medicine and Molecular Imaging volume 42, pages1284-1294(2015)

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Predictors Of Positivity Of [¹⁸F]F-Choline PET-CT In Prostate Cancer Recurrence. Preliminary Results

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Aim/Introduction: To analyze the validity of [¹⁸F]F-Choline PET-CT results in prostate cancer recurrence in our daily practice, based on theoretical cut-off points of prostate-specific antigen (PSA), its kinetic, and PSA doubling time (PSADT), to identify predictors of positivity and modify the indication criteria. **Materials and Methods:** Prior to the validity analysis, a descriptive, prospective analysis of consecutive patients with prostate cancer treated with curative intent by radical prostatectomy (RP) or radiotherapy (RT), who underwent PET-CT scan with recurrence criteria: PSA ≥1 or PSA 0.4-1 with PSADT <6 months after RP; PSA > Nadir + 2 after RT, was performed. **Results:** From April to December 2019, 69 patients were included, 40 were treated with RP (58%) and 29 with RT (42%). In 45 patients (65%) PET-CT was able to identify recurrence of the disease (positive PET) and in 24 it was not (negative PET). Of patients treated with RP, 82,5% (33/40) had PSA >1, and of those, 61% were positive PET. 17,5% (7/40) had PSA <1 and PSADT <6 months (28/69), with positive PET in 43% of patients. 76% of patients had a positive PET after RT. Positive PET results were obtained in 57% of patients with PSADT >6 months (28/69), in 71% if PSADT <6 months (41/69) and in 81% of patients if PSADT <3 months (16/69). After RP and RT, PET was positive in 50% and 62,5% of patients respectively if PSADT >6 months, in 61% and 92% if PSADT <6 months and in 77% and 100% if PSADT <3 months. **Conclusion:** Preliminarily and awaiting validation, it seems that PSA >1 after RP or Nadir +2 after RT is an indicator of PET-CT. There seems to be a tendency that shows that PSA <1 after RP is an indicator of PET-CT if PSADT <3 months. PSADT <3 or <6 months could be the best predictor of positivity of PET-CT with [¹⁸F]F-Choline in recurrent prostate cancer. **References:** None

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Evaluation Of ¹⁸F-Fluorocholine PET-CT Findings In Patients With Suspicion Of Prostate Cancer Tumor Recurrence And Gleason <7 Or PSA <2ng / mL Prior To PET

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Aim/Introduction: To analyze the PET CT findings visualized in studies with ¹⁸F-FCH, with tumor recurrence suspicion in patients treated of prostate cancer with Gleason score less than 7 or with a PSA value less than 2ng / mL prior to PET. **Materials and Methods:** Retrospective study was made from March 2016 to October 2019, including 20 patients (22 explorations) treated of prostate cancer (mean age 73 years) with tumor recurrence suspicion and doubtful imaging tests, considering two independent samples: those with Gleason <7 (14 patients) and those with PSA <2ng / mL prior to PET (6 patients). The PET findings, the