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Introduction & Objectives: Cribriform growth pattern (CP) in prostate cancer (PCa) has been associated with different adverse outcomes. Prostate-specific Membrane Antigen Positron Emission Tomography Computed Tomography (PSMA-PET/CT) has the highest sensitivity for detecting metastatic disease for PCa. The present study addresses if CP in biopsy is an independent risk factor for metastatic disease on the PSMA-PET/CT.

Materials & Methods: All treatment-naive patients with ISUP GG ≥ 2 and a 68Ga-PSMA-PET/CT from 2020–2021 were retrospectively enrolled. To test if CP in the biopsy was an independent risk-factor for metastatic disease on 68Ga-PSMA-PET/CT, regression analyses were conducted. Secondary, analyses were performed in different subgroups.

Results: A total of 401 patients were included. CP was reported in the biopsy of 252 (63%) patients. CP in biopsy was not an independent risk factor for metastatic disease on the 68Ga-PSMA-PET/CT ($p = 0.15$). ISUP GG 4 ($p = 0.016$), GG 5 ($p = 0.004$), higher PSA level groups (p value between 0.02 and < 0.001) and clinical EPE ($p < 0.001$) were all independent risk factors. In the groups with ISUP GG 2 ($n=99$), ISUP GG 3 ($n=110$) and the intermediate risk group ($n=89$) CP in biopsy was not a risk factor for metastatic disease on 68Ga-PSMA-PET/CT, and in high-risk group not an independent risk factor. If high-risk was applied as threshold, in 9(2%) patients' metastatic disease was missed, and lead to reduction of 22% of the PSMA-PET/CT performed.

Conclusions: CP in biopsy was not an independent risk factor for metastatic disease on 68Ga-PSMA-PET/CT. In clinical practice, the indication for imaging is not different from cases without CP.