13 Fusion biopsy of the prostate – is there any indication for standard biopsy still left?

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Introduction & Objectives: mpMRI and fusion biopsy technique is becoming a valuable and more precise tool for diagnosis of prostatic cancer. We report on our experience with fusion biopsy and evaluated whether might be still an indication for standard biopsy in this setting.

Materials & Methods: In December 2016 we started with fusion biopsy utilizing the GE Healthcare logiq E9™ - endfire system. Every patient presenting for fusion biopsy at mpMRI was re-reviewed by the urologist and the uro-radiologist to confirm indication in accordance to PI-RADS2 classification and thereafter patients were scheduled for biopsy under local AN. 71 pats were included and retrospectively evaluated. A fusion re-biopsy after negative standard biopsy was performed in 76.1% (54 / 71). In 23.9% (17/71) patients we performed primary biopsy. We performed random biopsy at fusion biopsy in 41 patients. mpMRI findings were PI-RADS 3 = 9, PI-RADS 4 = 49 (3 AS, 2 susp. recurrence following radiation) and PI-RADS 5 = 17. In patients with PI-RAD3 indication for biopsy was elevated PCA3, HG-PIN and patients desire in one case.

Results: We found prostate cancer in 63.3% (45/71). In 8.4% (6/71) pts the tumour was found at random biopsy only, in another 9.8% (7/71) at fusion biopsy only. In 45 patients adenocarcinoma was present:

Gleason score 6	17
Gleason score 3+4	17
Gleason score 4+3	7
Gleason score 8	4

In the 6 pats positive at random biopsy only we found GS6 (n=3) and GS 3+4 (n=3). In the 7 patients positive at fusion BX only we found GS6 (n=3) and GS 3+4 (n=4)

Conclusions: Results obtained suggest, that fusion biopsy has a much higher diagnostic yield for prostate cancer, but in the hands of experts! Standard biopsy is still mandatory in addition to fusion biopsy, since it may influence decision for therapy significantly.