The Evaluation of Effectiveness in the Lesion Suspicious Biopsies Detected by Ultrasonography and MRI

Introduction and Objective: We evaluated the effectiveness of the lesion-suspicious biopsy detected by ultrasonography and magnetic resonance imaging (MRI).
Materials and Methods: A total of 169 consecutive patients with elevated prostate specific antigen (PSA) levels of 4 to 30 ng/ml, without apparent invasion of prostate cancer detected by digital rectal examination (DRE). After caudal anesthesia, we underwent extended transrectal systematic 14-core biopsy of the prostate. Eight cores were obtained at peripheral zone, 4 at transitional zone and 2 at apex. In addition to the systematic biopsies, we added targeted biopsies at cancer-suspected lesions detected by ultrasonography or MRI.
Results: Cancer was histologically confirmed in 67 (39.6%) out of 169 patients with elevated PSA. We performed lesion suspicious biopsies in 130 (76.9%) of the 169 patients, then prostate cancer was histologically confirmed in 54 (41.5%) patients. Among those patients, 30 (56%) were histologically diagnosed with prostate cancer in suspicious lesions. In the remaining 24 (44%), prostate cancer was only detected in systematic areas. On the other hand, prostate cancer was not detected in 76 (58.5%) among lesion suspicious biopsy patients.
Conclusion: In the present study, we diagnosed prostate cancer in only one patient with suspicious lesions. We consider that extended 14 systematic prostate biopsies could cover almost all prostate areas. Therefore the effectiveness of lesion suspicious biopsy should be further discussed with more patient numbers.