

Clinical Pathology and Epidemiology

J Infec Dis Treat 2019, Volume: 5
DOI: 10.21767/2472-1093-C1-009

PATHOLOGIC ISSUES IN INTERPRETATION OF PROSTATE NEEDLE CORE BIOPSIES IN DEVELOPING COUNTRIES: MULTICENTER RETROSPECTIVE ANALYSIS

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Background: Current cancer register of Uzbekistan demonstrates that prostate cancer is the 5th leading cause of mortality. The lower incidence of disease in comparison with European countries could be due to the gaps in diagnosis, especially in pathology. Discovering the most useful and at the same time financially effective amount of immunohistochemistry (IHC) markers remain as the challenged topic in developing countries.

Purpose: The objective of this study is to evaluate the use of the p63 and AMACR in clarifying suspicious foci in prostatic needle biopsy specimens.

Materials: A total of 180 cases are selected from Jan'2017 to Oct' 2018. All cases were reviewed and divided into three groups. Benign (85), cases with suspicious foci (23 cases) and malignant (72 cases). IHC was carried out using monoclonal AMACR and p63 antibodies in the 23 suspicious cases along with positive and negative controls.

Results: This study showed AMACR had a sensitivity of 92%, specificity of 94%, whereas p63 had a sensitivity of 94%, specificity of 100%. All the 23 suspicious cases were resolved by using a combination of morphology and IHC expression p63 and AMACR. In nine cases (9/23), diagnosis was changed from the benign to malignant. In two cases, benign to high grade prostatic intraepithelial neoplasia (2/23) and in five cases from malignant to benign (5/23). This change was statistically significant with P value of 0.0011.

Conclusions: Histopathological examination is the gold standard and ordering immunohistochemistry prospectively is not necessary in all cases of prostatic needle biopsies. Our recommendation is the use of p63 in cases of morphologically ambiguous prostate biopsies and take into account that if expression would be aberrant (which occurs in <1%) than go to AMACR and accordingly utility of just one IHC marker would be economically beneficial for countries with limited financial resources.

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