

Clinical Stage Evaluation at Diagnosis of Prostate Cancer at Urology-Andrology Clinic CNHU-HKM Cotonou

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Abstract

Prostate cancer remains elderly man cancer. It is the most common form of non-skin cancer diagnosed in men, with three quarters of cases occurring in men aged 65 years and older. Digital rectal examination (DRE) still remains an important diagnostic tool and it should not be substituted to an isolated total serum PSA rise. The biopsy procedure, which is the gold standard of CaP diagnosis, is invasive and painful, the side effects are significant, sometimes serious. Multiparametric magnetic resonance imaging (mp-MRI) and Tomography with Emission of Positons are often used for diagnosis and follow-up of prostate cancer.

Keywords: Prostate cancer; Digital rectal examination; Urology-Andrology clinic; Serum prostate-specific antigen levels; Prostate biopsies

Commentary

Prostate cancer is the second most common diagnosed cancer and the sixth leading cause of cancer deaths in men, accounting for 14% of total new cancer cases [1]. Prostate cancer remains elderly man cancer. It is the most common form of non-skin cancer diagnosed in men, with three quarters of cases occurring in men aged 65 years and older [2,3]. As expected, the prevalence is most strongly related to age, with the prevalence doubling about every 14 years. Age only explains part of the considerable variation between studies: we could identify only one other clear factor: use of a Gleason score. The estimated mean cancer prevalence increased in a nonlinear fashion from 5% (95% CI: 3-8%) at age <30 years to 59% (95% CI: 48-71%) by age >79 years [4]. Digital rectal examination (DRE) still remains an important diagnostic tool and it should not be substituted to an isolated total serum PSA rise. Contemporary recommendations for prostate cancer screening incorporate the measurement of serum prostate-specific antigen (PSA) levels associated with other methods of detection such as digital rectal examination (DRE) and/or ultrasonography [5,6]. With regards to screening accuracy, studies have demonstrated that a PSA cut-off of 4.0 µg/L can detect many cases of prostate cancer; however, some will be missed [7]. Using a lower cut-off level detects more cases, but at the cost of falsely labelling more men as potentially having cancer. Whether, for instance, the PSA cut-off is decreased to 2.5 µg/dL, more than double the number of men aged 40 to 69 years will be labelled as a false positive [8,9]. However, its limitations have been increasingly recognized [10]. Over one million men undergo prostate biopsies annually in the United States, a majority of them due to elevated serum PSA [11]. The biopsy procedure, which is the gold standard of CaP diagnosis, is invasive and painful the side effects are significant, sometimes serious. More than half of the biopsies are negative for CaP partially because serum PSA can be elevated for reasons other than CaP (true negative biopsy), or because biopsy needles often miss tumour foci in the prostate (false negative biopsy) [12]. Recent efforts

to develop non-invasive alternatives are focusing on urine-based molecular assays (e.g., PCA3, TMPRSS2-ERG 13) and blood-based molecular assays (e.g., Prostate Health Index (PHI), four kallikreins score (4K) and CTC assays) [14,15].

Multiparametric magnetic resonance imaging (mp-MRI) and tomography with emission of positons are often used for diagnosis and follow-up of prostate cancer. The goals of initial diagnostic imaging evaluation can include identification and localization of occult metastatic disease (in lymph nodes and bone), assessment of resectability and/or curability, and prediction of local morbidity. Conventional imaging modalities, including CT and radionuclide bone scan, have demonstrated poor performance characteristics, often requiring correlation with MRI or bone biopsy in the event of solitary or equivocal abnormalities [16]. Numerous studies have now indicated that multiparametric (Mp) prostate MRI at 3 Tesla, including anatomical and functional sequences, enables accurate PCa detection and local staging with reasonable sensitivity and specificity [17]. Approximately 15% of men with prostate cancer are diagnosed with high-risk disease and are at increased risk of treatment failure and mortality [18]. Of men with newly diagnosed prostate cancer, 80% will have localized disease, 12% will have regional disease, and 4% will have distant disease [19]. However, for newly diagnosed high-risk prostate cancer, 22% of men will have a positive bone scan, 31% will have a positive abdominal CT, and 33% will have a positive pelvic CT on initial diagnostic imaging, highlighting the importance of imaging in the initial diagnosis of high-risk prostate cancer [20].

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