



## **PROSTATE CANCER SCREENING UPDATE**

### **PSA Testing: An Informed Approach**

Despite continuing controversy, for the foreseeable future the blood test Prostate Specific Antigen (PSA) remains the only initial, simple, cheap option available to screen for Prostate Cancer (PCa) in asymptomatic men to detect PCa at an early, curable stage.

Since PSA came into general use in the 1990s, its use, over-use and misuse have led to widely varying rates of utilisation across nations and controversy over its benefits versus harms, with harms characterised as “over-diagnosis” and “over-treatment” of non-aggressive, indolent, harmless cancers. This controversy however does not address the indisputable fact that in the UK over 47,000 new cases present and over 11,800 UK men are dying a lingering, painful death from PCa every year<sup>1</sup>. These figures are increasing, with the UK having one of the highest death rates in the world despite having one of its richest economies.

PSA based screening studies from Europe have been running well over 10 years and are reporting falls of over 40% in the death rate from PCa<sup>2,3</sup>. UK mortality lags well behind and probably less than 10% of UK men seek screening<sup>4</sup>. Although UK men over the age of 50 are actually entitled to a PSA test in line with the recommendations of the Prostate Cancer Risk Management Programme (Public Health England, March 2016)<sup>5</sup>, many GPs are unaware of this and are unable to provide up to date counselling<sup>6</sup>. This is of particular concern to men of black African and Caribbean heritage who carry a 1 in 4 risk of getting PCa and similarly for men with a positive family history.

Whilst the UK has no national screening programme, most national and international urological guidelines for PSA screening recommend<sup>7,8,9</sup>:

- Screening from age 45 for men with a family history of an immediate male relative with PCa and black African or African Caribbean men (risk 1 in 4).
- Obtain a baseline PSA in a man’s forties to predict future risk.
- Link PSA to a “risk calculator” to assess need and frequency of future PSA testing.
- Do not screen men below 40 or with less than 10 years’ life expectancy.

Whilst screening for PCa in the UK has remained static, its clinical treatment has taken big steps forward. Furthermore, the advances have been backed by solid and highly influential UK trial and audit evidence.

### 1. The PROMIS<sup>10</sup> and PRECISION<sup>11</sup> Trials

These UK trials demonstrated that if mpMRI was performed prior to biopsy for men with a raised PSA, no biopsy was necessary for 25% of men in whom no MRI abnormality was detected. If PCa was present in such men, it was non-aggressive and not clinically significant. Thus the risk of “over-diagnosis” and risk of unnecessary biopsy have been greatly reduced. Visible abnormalities however are likely to be significant and can be targeted with certainty.

### 2. The ProtecT Trial<sup>12</sup>

This UK trial reported the 10 year outcome of 1643 UK men with apparent, non-aggressive, PSA screen-detected PCa randomised to receive radical treatment or active surveillance. After 10 years the death rate was only 1% whether treated radically or merely followed by active monitoring. It thus confirmed the safety of surveillance alone for non-aggressive PCa.

### 3. The 4<sup>th</sup> National Prostate Cancer Audit<sup>13</sup>

This demonstrated that during the 12 months 1/4/15-31/3/16 nearly 42,000 men were diagnosed with PCa in England and Wales. 54% were over age 70 and 51% had advanced PCa at presentation – 15% having metastatic disease. Whilst these statistics confirm the paucity of early diagnosis in the UK, the latest statistics on biopsy and treatment are much more encouraging. mpMRI is increasingly being used prior to prostate biopsy and only 8% of men with low-risk, localised PCa underwent radical treatment. Thus potential “over-diagnosis” is being minimized and “over-treatment” continues to reduce, having fallen from 12% in 2014/15.

These advances in clinical care starkly illustrate the widening gap between our poor screening statistics and the excellent care now available to all UK men lucky enough to have screen-detected PCa at an early, curable stage. Finally, concerns about the utility of PSA as a screening tool have been fully addressed by Prostate Cancer UK’s “13 Consensus Statements”<sup>14</sup>.

In conclusion, in the absence of better options, application of PSA screening according to these optimum criteria for appropriately informed men over the age of 40 would appear to be the best way we can bring about a significant reduction in the UK’s unacceptable death rate from Prostate Cancer.

## References

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