



PSA testing

A Primary Care perspective

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“Care in a cold climate”



Aims

- “ Prostate cancer diagnosis
- “ Tests / Dilemmas
- “ What should patients understand before testing?
- “ Primary care perspectives
- “ Screening
- “ The future.....

Prostate Cancer

The size of the problem

- “ PCa – incidence 214 per 1000 men
- “ Commonest cancer in men in UK (Cancer Res UK 2009)
- “ More common than lung and colorectal cancer
- “ Rise in incidence not reflected in mortality

Tests aiding diagnosis in Prostate Cancer

- “ PSA (age-specific reference ranges) / DRE
- “ Transrectal ultrasound prostate biopsy
- “ PSA density (transition zone density); PSA velocity
- “ Free:total PSA ratio
- “ PCA3

What is PSA?

- “ 34kDa glycoprotein molecule
- “ Secreted exclusively from acinar epithelial cells of prostate to liquefy semen
- “ Most secreted into lumen of acini
- “ Small amount absorbed into blood stream
- “ ---→measurable

Implications of raised PSA

- “ Specific for prostate but not for cancer
- “ Also raised in infection/BPH/inflammation/prostate massage
- “ → to biopsy or not to biopsy
- “ OR after –ve biopsies – to re-biopsy or not

Free:Total PSA (Oesterling 1995)

- “ Increased PSA complexes in PCa
- “ Stratification of risk of PCa for men with total PSA between 4 and 10ng/ml and negative DRE
- “ PCa on biopsy on 56% men with f/t PSA<0.10
8% men with f/t PSA>0.25
- “ *Limitations – free PSA ?unstable
?use if PSA>10ng/ml
No use in f/u of known PCa*

PCA3

- “ PCA3 – prostate cancer gene 3 – amplified nucleic acid assay, using TMA
- “ Quantifies PCA3 and PSA mRNA in prostate cells found in urine after prostate massage
- “ PCA3 score calculated as ratio PCA3:PSA mRNA – higher level → increased risk Pca
- “ >80% specificity depending on cut-off values
- “ £300-400 → not currently NHS-funded

...summary so far...

- “ PSA test – sensitivity/specificity dependent on cut-off values
- “ Leads to invasive biopsies (?more than once)
- “ Other tests available may help in diagnosis
- “ BUT are either too expensive or not as commonly used
- “ No perfect tests (yet)

PSA testing

- “ Considerations
- “ Raised reading → invasive tests / worry
- “ Adequate patient information
- “ Implications of result
- “ Well informed patient counselled by experienced clinician

Patient Information:

What should patients be told?

- “ Prostate cancer risk management programme
- “ 2009 publication
- “ Detailed (?too detailed) information sheet
- “ Patients need to understand implications/
possible outcomes of test (TRUS/biopsy)
- “ PSA should not be checked as a ‘routine’
- “ Patients should be counselled by experienced
clinician prior to test

...The reality...

- “ 1/3-2/3 patients unaware tested (Federman 1999; Lamplugh 2003)
- “ Patients aware of test often inadequately counselled
- “ Often done as a routine test
- “ (diabetics/'health screens'/BP monitoring/etc)

PSA testing in Primary Care (in my practice)

- “ Sometimes done as tick box exercise whilst having other tests
- “ Hca/nurse instigated - ?appropriate
- “ Patients often know that have had test, but unaware of implications – ‘just wanted to know’
- “ First visit to GP may be with raised result

Audit

- “ Practice 4400 patients (2100 men)
- “ 3 month period
- “ 53 tests done on 50 patients (age 44-90)
- “ 7 follow up (previous raised/PCa)
- “ 31 done as investigation of LUTS/other sx
- “ 15 done as ‘routine’

Audit (continued)

'Routine' test results

- “ 11 patients normal PSA
- “ 4 patients had raised PSA
- “ Subsequent GP discussion – 2 referred on 2ww pathway; 2 monitoring at practice (age 75+)
- “ ?all might be referred from different practice

Issues raised...

- “ Patients faced with referral/tests/worry
- “ Do GP’s feel appropriately trained to counsel patients or manage the result
- “ 2ww referrals (?appropriate)

More issues raised... (the cold climate)

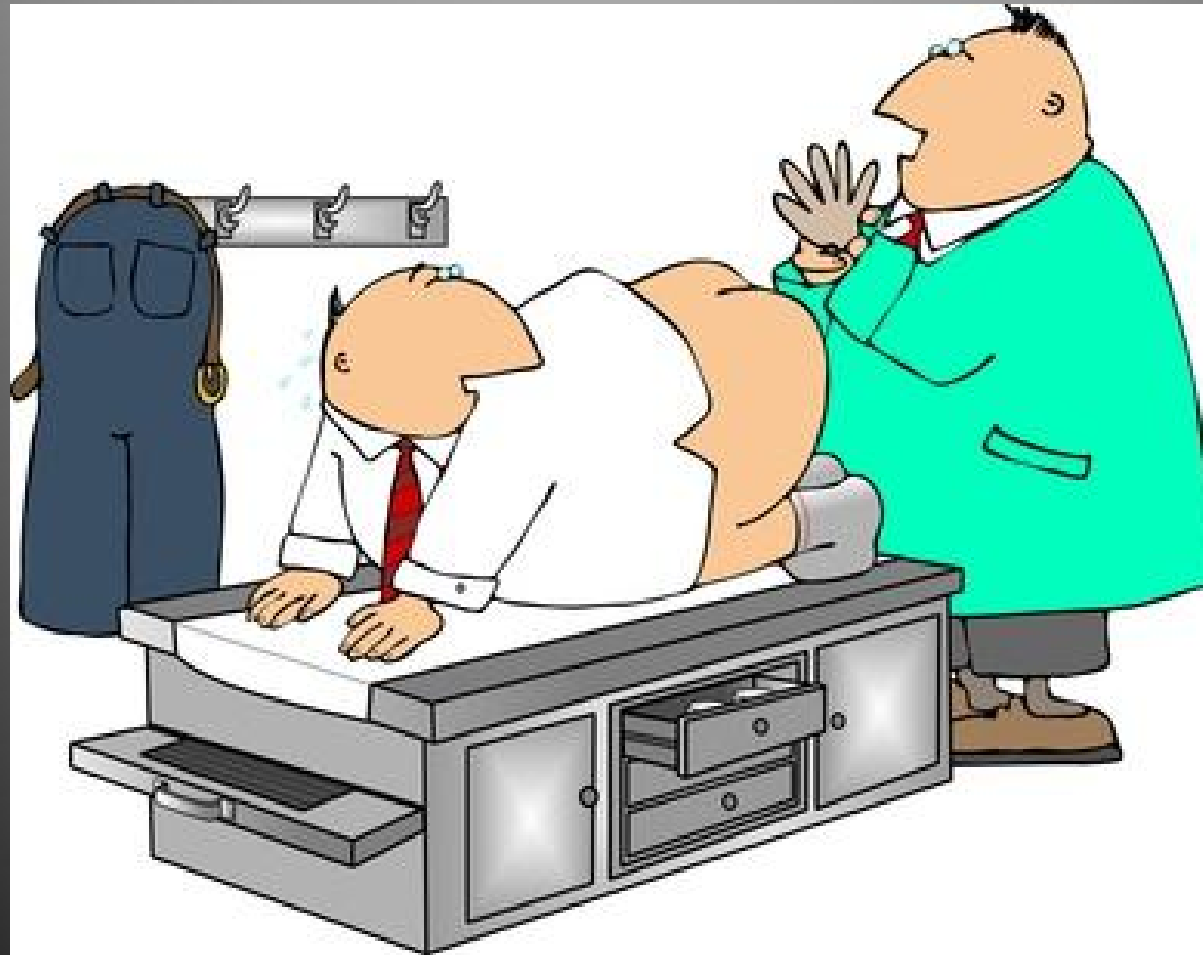
- “ Potential for large number referrals
- “ Issues around outpatient capacity and meeting targets
- “ Potential for tests that won't change management or outcomes

Training needs

- “ HCA/practice nurse training – implications of raised PSA
- “ GP education – to feel confident to counsel; to feel confident to manage/observe patients where appropriate; to refer at the right time

ie ***EDUCATION! EDUCATION! EDUCATION***

Should we screen?



Should we screen?

Wilson-Junger Criteria

- “ Significant health problem
- “ Natural history well-understood
- “ Detectable early stage
- “ Treatment at an early stage should be of more benefit than later stage
- “ Acceptable test – safe, precise, validated
- “ Cost and risks balanced against benefits
- “ etc

Verdict

- “ Is a significant health problem
- “ Acceptable test (but unable to differentiate indolent from lethal disease)
- “ Natural history understood but variable
- “ Earlier diagnosis but to what gain?
- “ Age/co-morbidity at diagnosis determines outcome
- “ ?cost/risk outweigh benefits?

Should we screen?

- “ EAU – current data insufficient to recommend
- “ AUA – offered to well-informed men >40yrs with life expectancy >10years
- “ American Cancer Society – routine not supported – discuss implications
- “ NHS(UK) – informed choice programme
- “ Recommended use of prostate cancer risk management as decision tool

Should we screen?

“ ‘...the value of prostate cancer screening is still unclear...1410 patients would need to be screened with PSA testing (and 48 additional men with cancer treated) to prevent one death from prostate cancer’

Andriole et al 2009

But.....

- “ Evidence that early testing (?age 40) may help identify those at risk
- “ PSA >0.6ng/ml under 40years at increased long term risk of prostate cancer Baltimore longitudinal study of aging,

Fang et al 2001

- “ How to counsel patients prior to screening with this in mind
- “ May justify selective screening

Summary



Thank you

Any questions?