

Use and results of prostate specific antigen testing in general practice in the former Aarhus County

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Introduction

Prostate Cancer (PC):

- Most frequent cancer type among Danish men
- The incidence is increasing
- Often asymptomatic, complicating clinical diagnosis

Prostate-specific antigen (PSA) testing:

- Paraclinic tool for PC diagnosing
- Danish Urological Society recommended PSA testing in Denmark in 1997
- Screening utilising a PSA test is not officially recommended in Denmark
- PSA test results > 4 micromole/L → referral to specialised healthcare

Aim

Our aim was to study the use and the results of the PSA test in general practice in the former Aarhus County during the period 1995-2006.

Methods

Data from 1995 through 2006 was collected from:

LABKA - a laboratory database:

86,077 PSA tests results from 39,019 men resident in the former Aarhus County

The National Patient Registry (NPR):

148,210 records of ambulatory treatments or admissions with prostatic disease diagnostic codes

Samples were marked with ordering physician:

- A general practitioner
- A specialized consultant

Samples were categorized in four categories:

- *Incident samples*
- *Control samples*
- *Repeated normal samples*
- *Repeated raised samples*

Data sets were combined by the unique personal identification number allocated to all Danish citizens.

Descriptive statistics were used to analyse the data.

Results

Testing frequency increased 43 times during this period.

Proportion of samples ordered by general practice increased from 38.6 % (36.4-40.8 %) in 1998 to 66.1 % (65.4-66.8 %) in 2006 (Figure 1).

Proportion of incident samples ordered by general practice with results below 4 mmol/L, soared by nearly 300 %.

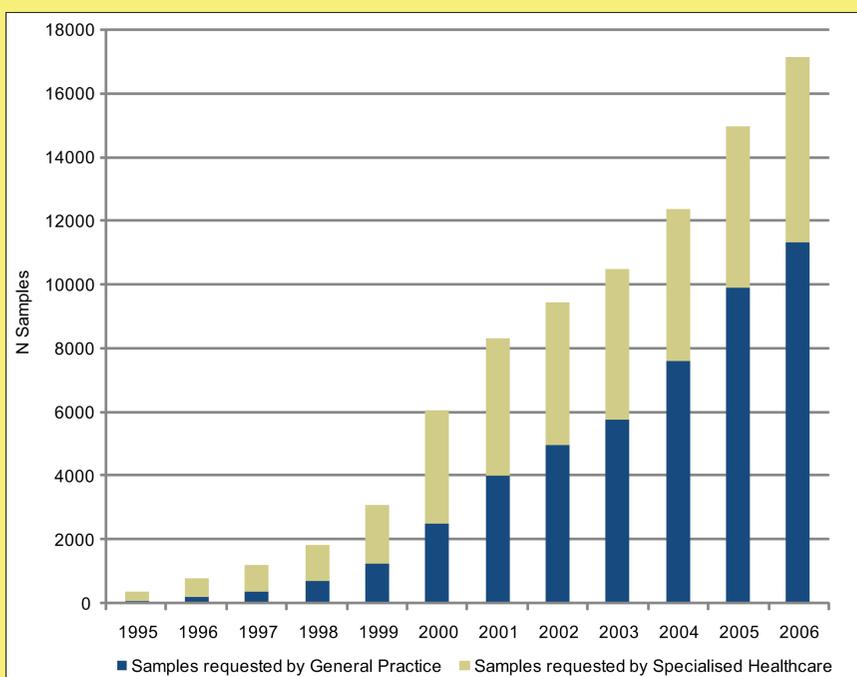


Figure 1: PSA testing frequency by ordering part

All four sample types increased throughout this period.

Incident samples accounted for the most precipitous rise (Figure 2).

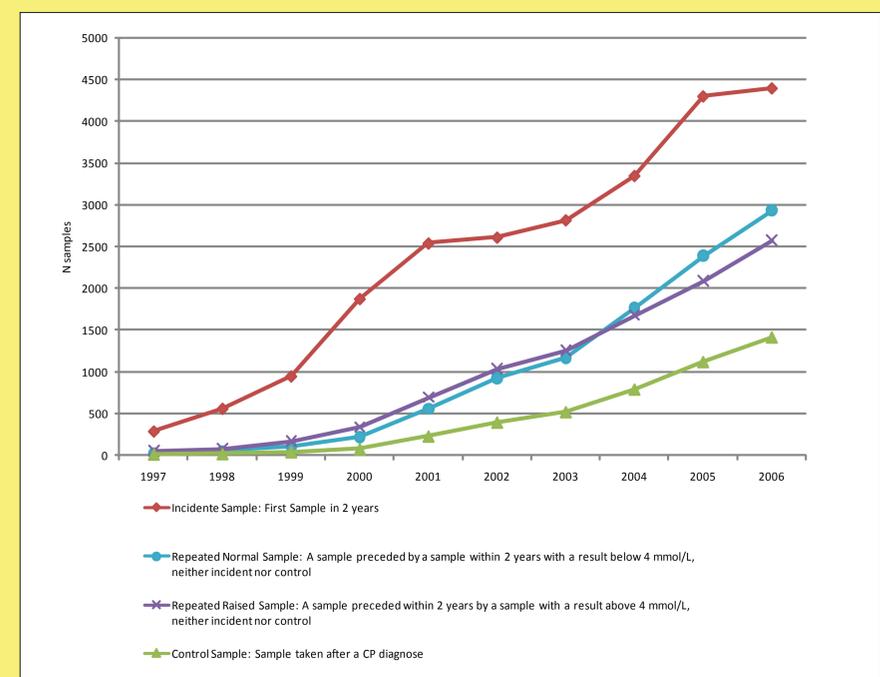


Figure 2: Categorical distribution of samples ordered by general practice

Discussion

Far most PSA testing is taking place in general practice.

The rise in incident PSA samples ordered by general practice, indicates that general practice is testing more men.

The increase in repeated samples could arise from the General Practitioners choice of the watchful waiting strategy.

Expanding the test-group along with sample frequency in general practice may induce overheating of the specialised healthcare.

Securing compliance to the guideline for PSA testing is important when meeting the future task of optimizing the healthcare.