



GLOBAL JOURNAL OF MEDICAL RESEARCH: K  
INTERDISCIPLINARY

Volume 15 Issue 1 Version 1.0 Year 2015

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals Inc. (USA)

Online ISSN: 2249-4618 & Print ISSN: 0975-5888

## Prostate Cancer Screening Should Men be Screened for Prostate Cancer?

By Sangeetha Bobba

*Introduction-* Prostate cancer has the highest incidence of all cancers in Australian men following bowel cancer. Hence prostate cancer screening would be an ideal preventative measure. However, there are both arguments for and against such screening. This report will discuss both arguments and come to a conclusion.

The World Health Organisation (WHO) defines the purpose of screening as to identify the presence of a specific cancer in an individual that does not demonstrate any symptoms. Australia currently employs the WHO's screening program criteria to determine whether a particular illness should be screened.

*GJMR-K Classification: NLMC Code: QZ 20.5*



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# Prostate Cancer Screening

## Should Men be Screened for Prostate Cancer?

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### I. INTRODUCTION

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### II. WORLD HEALTH ORGANIZATION PRINCIPLES OF SCREENING

World Health Organization guidelines were published in 1968, but are still applicable today.

1. The condition should be an important health problem.
2. There should be a treatment for the condition.
3. Facilities for diagnosis and treatment should be available.
4. There should be a latent stage of the disease.
5. There should be a test or examination for the condition.
6. The test should be acceptable to the population.
7. The natural history of the disease should be adequately understood.
8. There should be an agreed policy on who to treat.
9. The total cost of finding a case should be economically balanced in relation to medical expenditure as a whole.
10. Case-finding should be a continuous process, not just a "once and for all" project.

Prostate cancer screening satisfies all these criteria. Consequently it would be advantageous in terms of cost-benefit for Australia to employ a universal prostate cancer screening program.

Most screening procedures are non-invasive in order to make them cost-effective and convenient for individuals. Screening modalities including breast exams, mammography, pelvic exams, digital rectal

exams and blood tests require no preparation by the individual needing screening.

As no medical investigations are perfect including screening modalities, there are several adverse effects associated with screening. Consider a case in which an individual's prognosis is the same with or without screening. This individual may experience a longer duration of psychological and physical harm associated with the knowledge of illness and fruitless investigations and treatment. All investigations and screening results have a potential for false negatives and false positives. In the former instance, the individual may become complacent in the identification of symptoms and warning signals while in the latter situation, the individual may be subjected to unnecessary invasive diagnostic tests and procedures. The legal and ethical issues regarding disclosure to insurance companies and potential employers also requires consideration as it may potentially lead to discrimination and psychological harm.

A summary of the potential adverse effects of universal prostate cancer screening (Health Matters, 2013):

- Stress and anxiety caused by false positive screening results
- Unnecessary investigation and treatment of false positive results
- Prolonging knowledge of cancer if no curative treatment can be implemented at that stage in individual cases
- A false sense of security caused by false negatives, which may delay final diagnosis due to individual complacency in recognising symptoms of cancer
- Overuse of scarce medical resources
- Unnecessary and uncomfortable procedures seeking cancer that may be unlikely in individual cases

Prostate Specific Antigen (PSA) used to screen prostate cancer is not 100% specific or sensitive. Randomised Controlled Trials are required to determine the benefit of screening. Of any studies undertaken, both the study design and study analysis must be investigated further before a judgement regarding the effectiveness of screening can be made. Randomised Controlled Trials are considered to produce the most reliable results as they limit bias. The studies must be analysed which ideally should incorporate the

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investigation of possible biases including lead time bias, length bias, selection bias and overdiagnosis bias.

Due to the high incidence and severity of prostate cancer a screening program implementing universal screening would be beneficial in Australia. Such a screening program satisfies the WHO criteria. However, the outcome of a screening program depends on several other factors such as availability, accessibility, health promotion, cost, community attitudes and knowledge. The General Practitioner possesses a crucial role in determining the effectiveness of screening programs. They are important community educators, health promoters and a vital point of contact for individuals considering being involved in screening. In addition, the process of follow-up of positive test results and urgent referral is an imperative role of the General Practitioner in screening programs.

From investigating the significant impact in terms of incidence and prognosis of prostate cancer in Australia it can be deduced that screening would certainly be advantageous. Many studies have demonstrated the benefits of universal prostate cancer screening. The circumscribed screening program satisfies the WHO criteria. However, barriers and adverse effects of screening do exist. These may be overcome by increasing public awareness via health promotion strategies implemented conjointly by Health Professionals and the Australian Government to maximize the potential participation rates and success of a screening program. Currently the Red Book Clinical Guidelines does not recommend screening without symptoms and a discussion with the patient regarding the pros and cons of testing for prostate cancer.

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