

# Cancer screening tests in the dock

Professor Shima Gyoh berates tests that sometimes lead to 'cures' that are actually worse than the diseases themselves



We have been brought up on the very sound principle that the earlier you diagnose cancer, when it is still confined to its area of origin, the relatively benign the treatment that can produce a genuine cure. The problem has been that most cancers at this stage do not produce symptoms, and the person, definitely not yet a patient, has nothing to complain about. By the time symptoms appear, the cancer is already a systemic disease and all treatments, no matter how radical, can only prolong miserable life for a few miserable years. Since cancers are more common in older people, prophylactic screening for certain cancers has become mandatory for physicians to do with regards to the age and sex of their patients. Failure to do so could land the practitioner in trouble.

The public has been encouraged to go and see the doctor for routine check-ups even when they have no complaints, and to also examine themselves where feasible. Tests have been designed to diagnose the earliest stirrings of cells towards malignancy, and ingenious methods of completely removing them have been established. Two tests that have become widely used by the elite of society are now in the dock for violating the basic principles of the foundation of medicine – *'Most of all do no harm!'* The cure seems to be more harmful than the disease.

The first offender is scanning for prostate specific antigen (PSA), an enzyme secreted by normal prostate cells into the seminal fluid, but small quantities of which escape into the blood, the level correlating with the size of the gland and reaching higher levels with carcinoma of the prostate.

Screening men would isolate those with high PSA levels indicative of malignant growth and they would have early total prostatectomy, thus saving them from the metastatic cancer that could have developed later. Unfortunately the operation causes serious complications with an operative mortality of about 1%, and 30–40% of survivors will suffer from urinary incontinence and/or erectile dysfunction. Even patients who suffer from disseminated disease will find these complications an unattractive exchange, not to mention the symptomless person who just went for a medical check-up.

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Prof Shima Gyoh has held many posts ranging from village doctor to DG of Nigeria's Federal Ministry of Health and Chair of the Medical and Dental Council of Nigeria.

PSA screening was born in controversy, well summarised in this statement: 'Though many men die with prostate cancer, relatively few die of prostate cancer.' As men grow older, the incidence of focal carcinomatous changes in the prostate increases as serial autopsy studies have shown. At the age of 80, almost 80% of prostates contain areas of carcinoma in situ. It is now believed that the majority of such localised cancers do not advance to cause symptoms within the life span of the patients; they die of other causes. Operations based on PSA screening will therefore result in operating on numerous patients whose tumours would have remained in situ and not caused any danger to their lives. Besides, PSA gives many false-positives especially at the lower cut-off point. The United States Preventive Service Task Force has now advised against PSA-based screening for prostate cancer.

The second culprit is mammography screening which uses soft X-rays to detect subtle changes in the architecture and calcification characteristics of breast tissue that represent premalignant or early malignant changes before the stage of developing a palpable lump. Millions of women who had undergone drastic treatments involving mastectomy, hormones, cytotoxic drugs and radiotherapy as a result of mammography diagnosis were no doubt grateful for this advance in medical science. However, studies are now suggesting, just like in the prostate, that many of these tumours would not have developed into clinical disease. Even the incidence of late metastatic disease, which early diagnosis and extirpation should prevent, has not been shown to be significantly reduced by mammographic screening of women over 40. Both tests are good, but studies indicate that using them for mass screening has led to over-diagnosis and unnecessary treatments, and they should only be done in patients with symptoms or when there are other indications for extra vigilance.

Genetics is the up-and-coming medical science that would be more widely used than any other before it. Genetic testing is proving to be more reliable. The technology is fast improving in both simplicity and accuracy, as already achieved in some types of carcinoma of the breast. The expense too is coming down, and will soon be sufficiently affordable to enable it to play an increasingly significant and vastly better role in the prophylaxis and even the treatment of not just cancer, but of a large and growing number of diseases.

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