QUIZ FEEDBACK

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Screening tests

Introduction

This quiz feedback provides an opportunity to revisit the July 2010 "Best Tests" document and accompanying quiz which focused on appropriate use of laboratory screening tests in the primary care setting. All general practitioners who responded to this quiz will receive personalised online feedback and CME points

1.	Which of the following is true about screening tests?		
		Your peers	Preferred
☐	All screening tests do more good than harm	11%	
☐	A test can only qualify as a screening test, if there is robust scientific evidence to support its use	83%	✓
☐	The health service must have sufficient capacity to cope with diagnosis, follow-up and treatment	96%	✓
☐	Patients should be given sufficient information to allow them to decide for themselves whether or not they should be screened	90%	✓

Comment:
Screening tests should be based on sufficient evidence that the test demonstrates more good than harm. An example of possible "harm" (in the form of anxiety, unnecessary referrals etc) is in the theoretical case of a PSA test being ordered in an asymptomatic, well male aged > 75 years. Here a raised PSA level result may cause increased anxiety and lead to unnecessary referrals for treatment, when it is less likely that prostate cancer in an asymptomatic older male will impact on that patient's lifespan and health.

The provision of information and discussion about screening tests may take considerable effort, time and skill, and many GPs are not able to easily fit this into the usual 15 minute consultation. This is where written information about testing in the form of patient information leaflets can be invaluable e.g. pamphlets discussing the benefits, limitations and harms of PSA testing.

2.	Mark each of the following as a harm and/or benefit of screening						
Harm	Benefit		Your peers		Preferred		
			Harm	Benefit	Harm	Benefit
☐	☐	Reassurance from a negative result	60%	80%	✓	✓
☐	☐	Earlier treatment options	17%	99%	✓	✓
☐	☐	Diagnosis earlier in the course of the disease	36%	94%	✓	✓
☐	☐	Screening available to everyone in the target group	12%	90%		✓

Comment:
Intuitively it seems that screening would be the ideal way to identify people early in the course of a potential disease process. However screening can cause harms as well as benefits to the patient.

Those with true negative test results may be reassured, however for some a negative result will be false reassurance as it may actually be a false-negative result, with the possibility of later treatment and a worse prognosis.

Earlier treatment options may include less expensive treatment, less radical treatment and a cure for some early cases, with improved quality of life. But this needs to be balanced against the possibility of over-treatment of questionable abnormalities.

Earlier diagnosis in the course of an illness can cause lead-time bias. This is where a person may not actually have a better survival (or extended life) but just spends a longer time living with the known illness.

3.	Why are tumour markers not recommended as screening tests?		
		Your peers	Preferred
☐	They may be elevated by other conditions	97%	✓
☐	Not all people with the condition will be positive	91%	✓
☐	Tests are not widely available	15%	
☐	They are better suited for use as monitoring tests	95%	✓

Comment:
In primary care the key role for most tumour markers, with the exception of PSA, is in the management of patients with established malignancy. Nearly all tumour markers show some correlation with the clinical course of disease, with marker elevation in any stage declining to normal after a curative intervention.

Tumour markers are not recommended for screening asymptomatic patients for malignancy because they generally:

- Lack specificity – many patients may have an elevated result due to benign disease
- Lack sensitivity – many patients with malignancy will have a normal result

4.	Which of the following factors are controversial, when considering PSA testing in asymptomatic men?		
		Your peers	Preferred
☐	Testing reduces prostate cancer mortality	74%	✓
☐	Benefits of treatment	72%	✓
☐	Harms from testing	77%	✓
☐	Adoption of a national screening programme in New Zealand	74%	✓

Comment:
The New Zealand mortality rate, due to prostate cancer, has remained static for approximately 50 years (according to data collected by the Cancer Society of New Zealand) despite the increase in the number of PSA tests being performed in recent years.

Two recent trials, the European Randomised Study of Screening for Prostate Cancer (ERSPC) and the Prostate, Lung, Colon and Ovary Trial (PLCO), have not helped to clarify whether more benefit than harm is achieved with PSA screening. In the ERSPC trial fewer prostate cancer-related deaths occurred in the screened group than in the control group.[1] However in the PLCO trial researchers found no difference in prostate cancer-related deaths between the screened and control groups.[2]

A national screening programme has not been recommended in New Zealand as there is a lack of consensus if the benefits of screening outweigh the harms.

There is no PSA level below which a man can be completely reassured he does not have prostate cancer. A significant number of men with prostate cancer will have a normal PSA.

1. Schroder F, Hugosson J, Roobol M, et al. Screening and prostate-cancer mortality in a randomised European study. N Engl J Med 2009;360:1320-8.
2. Andriole G, Crawford E, Grubb R, et al. Mortality results from a randomised prostate-cancer screening trial. N Engl J Med 2009;360:1310-9.

5.	What should be considered when discussing PSA testing with patients?		
		Your peers	Preferred
☐	Present a balanced picture of the harms and benefits	98%	✓
☐	Support the patient to make the best decision for him	96%	✓
☐	Point out the increased risk due to age or family history	92%	✓
☐	Let him know that a normal result can reassure him that he is free of prostate cancer	3%	

Comment:
GPs are the "gate-keepers" for PSA testing – they influence who does and does not get tested. The New Zealand Guidelines Group recommends that every man has the right to decide for himself whether or not to be tested and that GPs should advise patients of the risks and benefits of testing, as well as the likelihood of them developing prostate cancer.

Under the Code for Health and Disability Services Consumers' Rights Regulations 1996, doctors and other practitioners have a duty to provide good, balanced information on prostate cancer, prostate cancer treatment and the possible benefits and harms of PSA testing.

The risk of prostate cancer increases with a positive family history. The risk is greater if a close relative is diagnosed before age 65 years or if more than one close relative is affected.

6.	Which is true about bowel cancer screening in New Zealand?		
		Your peers	Preferred
☐	A programme is to be piloted before a final decision is to be made	92%	✓
☐	Development of all stages of the screening pathway is happening now	28%	
☐	A number of developed countries already have bowel cancer screening programmes	95%	✓
☐	At this stage, a national screening programme in New Zealand is scheduled to start in 2011	16%	

Comment:
Bowel cancer screening programmes are currently running in many developed countries, including Australia and the United Kingdom. New Zealand has no national bowel cancer screening programme but is to undertake a screening pilot, anticipated to begin in 2011. It will operate in one or two regions of New Zealand and will run for four years. A decision on whether New Zealand adopts a national bowel cancer screening programme will be made following the evaluation of this pilot programme.

7.	CA 125 may be elevated by which of the following conditions?		
		Your peers	Preferred
☐	Benign ovarian cysts	97%	✓
☐	Menstruation	93%	✓
☐	Irritable bowel syndrome	1%	
☐	Endometriosis	99%	✓

Comment:

Carbohydrate antigen 125 (CA 125) may be raised in a variety of non-malignancy related gynaecological conditions e.g. menstruation, pregnancy, benign ovarian cysts, PID and endometriosis, non-gynaecological conditions e.g. cirrhosis, ascites, renal failure and pericarditis and in ovarian cancer.

Although CA 125 is frequently requested when investigating suspected ovarian cancer, its main role is for the management of ovarian cancer in secondary care. CA 125 is not recommended for screening or diagnosis and its role in primary care is limited. In rare situations, CA 125 may be used to help distinguish benign from malignant disease, particularly in post-menopausal women, presenting with pelvic masses or in women from families with a history of hereditary ovarian cancer. In these situations, it is recommended that CA 125 be performed in conjunction with transvaginal ultrasound.

8.	Which of the following would be an appropriate use of CEA?		
		Your peers	Preferred
☐	Screening of a suspected bowel cancer	1%	
☐	Used in conjunction with other tumour markers, to help exclude malignancy in patients with unusual symptoms	7%	
☐	Monitoring patients with bowel cancer	98%	✓
☐	Rarely indicated in primary care	70%	✓

Comment:

Carcinoembryonic antigen (CEA) may be raised with cancer of the colon but also in other cancers (lung, breast, liver, pancreas, thyroid, stomach and ovary) or non-cancerous conditions e.g. ulcerative colitis and smoking.

CEA is not recommended as a screening or diagnostic test for colorectal cancer due to its poor sensitivity and specificity, and because of the low prevalence of colorectal cancer in asymptomatic people.