

If you can look into the seeds of time  
 And say which grain will grow and which will not,  
 Speak then to me...  
*William Shakespeare, Macbeth (Act I, Scene III)*

Embarrassingly for the medical profession, the century that began so promisingly with the sequencing of the human genome may conclude with lower life expectancy than in the previous century.<sup>1</sup> Obviously, something is not right with our current approach to health. Many believe the answer lies in a population-based approach to disease, with prevention and early detection at the fore. As a result, great resources have been deployed in screening for the major killers, namely cardiovascular disease and cancer.

Medical screening is the work of the ambitious. The aim to decrease the burden of disease through early detection and subsequent early treatment has intuitive appeal. However, some within the medical profession are hesitant to proclaim universal approval, expressing pragmatic concerns over the effectiveness of large-scale screening programmes. Some screening methods, for example, the simple heel-prick used in the detection of newborn PKU, are an agreed success; however, the value of mass screening in breast and prostate cancer remains controversial.<sup>2</sup>

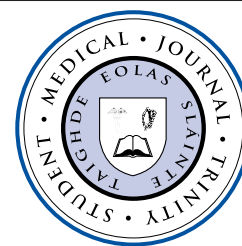
The recently instituted BreastCheck programme in Ireland offers mammograms every two years to women aged 50 to 64 years. This is similar to that offered in the UK by the National Health Service, which provides mammography every three years for women in the same age group. However, in the United States the American Cancer Society recommends yearly mammograms for all healthy women aged 40 years or older. This discrepancy illustrates the lack of agreement among national institutions on the most effective strategies for breast cancer screening. While other factors, including economic considerations, no doubt play a role in this discrepancy, some analysts believe the justification for population-wide mammography screening remains to be secured in high-quality evidence.<sup>3</sup> Further examination of this and other important issues is discussed later in this edition of the TSMJ.

Perhaps better established is the evidence for cardiovascular risk profiling. Heart disease is the leading cause of death in industrialised nations and promises to remain so for the next generation at least. Cardiovascular risk assessment has become an integral part of general medical practice and has proven to be an effective adjunct for both primary and secondary disease prevention. However, it is important to note that screening for traditionally accepted risk factors fails to predict more than 50 percent of acute cardiovascular events.<sup>4</sup> This illustrates two key points: firstly, our understanding of this major disease is incomplete; secondly, epidemiological discovery of new risk factors may lead to greater understanding of the disease – a “bed to bench” approach. This search for novel risk factors has resulted in an explosion of studies on the subject. Among these are examples illustrated by two articles featured in this edition of the TSMJ. Whether these or other novel markers find their way into routine practice remains to be seen, but the search will continue.

For systems of medical screening to achieve their desired goals, programmes must be evaluated with honesty and rigour. Without evidence of clear benefit, it would be unethical to encourage patients to participate in screening programmes, just as would it be unethical to prescribe drugs without proof of safety and efficacy. However, we must also remain optimistic that appropriate screening tools and evidence for their effectiveness will be established. It is the hope of all of us that we will look after our patients knowing we are truly helping them.

**References**

1. Olshansky SJ, Passaro DJ, Hershow RC, et al. A potential decline in life expectancy in the United States in the 21st century. *N Engl J Med* 2005;352:1138-45.
2. Law M. Screening without evidence of efficacy. *BMJ* 2004;328:301-302.
3. Olsen O, Gotzsche PC. Screening for breast cancer with mammography. *The Cochrane Database of Systemic Reviews* 2001;4:1877.
4. Ridker PM, Glynn RJ, Hennekens CH. C-reactive protein adds to the predictive value of total and HDL cholesterol in determining risk of first myocardial infarction. *Circulation* 1998;97(20):2007-11.



TSMJ 2005  
 Committee

Advisers  
 Prof. Conleth Feighery  
 Prof. Hilary Hoey  
 Prof. Moira O'Brien

Director  
 Rebecca O'Rourke

Chief Editor  
 Ciaran McMullan

Editors  
 Melissa Evans  
 Ann Gallagher  
 Tim Kristedja  
 Peter Lonergan  
 Sean O'Dowd  
 Aparna Swaminathan

Finance Manager  
 Deborah Molloy

Marketing Manager  
 Jarushka Naidoo

Marketing  
 John Kao  
 Ivan Wei Man Lim

Production Manager  
 Sandeep Bhachu

Production  
 William K.L. Chan  
 Claire Donohoe  
 Rachel Liu

Sponsorship Manager  
 Oxana Bailey

Sponsorship  
 Niamh Appleby  
 Ruth Cooney

Website Manager  
 & Conference  
 Audrey Dillon