Effect of population-based screening on breast cancer mortality

Although the wider scientific community has long embraced the benefits of population-based breast screening, there seems to be an active anti-screening campaign orchestrated in part by members of the Nordic Cochrane Centre. These contrary views are based on erroneous interpretation of data from cancer registries and peer-reviewed articles. Their specific aim seems to be to support a pre-existing opposition to all forms of screening.[1]

These individuals, making claims of poor methods, selectively discount overwhelming scientific evidence from numerous randomised trials in different countries that organised screening reduces breast cancer mortality. They claim that the significant decrease in breast cancer mortality achieved by screening is due to improvements in treatment alone, discounting the benefits of early detection. If true, this would imply that breast cancer is an exception among adenocarcinomas in that early detection does not improve prognosis—a claim contrary to the evidence.

For women with breast cancer, early detection also results in improved quality of life from less extensive surgical treatment. Women with screen-detected breast cancer in the UK have half the mastectomy rate of women with symptomatic cancers—ie, 27% versus 53%.[2]

Organised, high-quality breast screening is an important public health initiative by numerous governments worldwide. These policies are based on robust and extensive analysis of individualised patient data from scientific trials, with particular attention paid to the balance of potential benefits and harms.[3] To imply that such an international action is mass misrepresentation, or that screening is done for the benefit of self-interested professionals, is as perverse as it is unjustified.

Comprehensive guidelines deal with the entire screening process.[4] Organisations responsible for screening programmes regularly review published evidence on the effects of mammographic screening, and also contradictory interpretations.

We consider the interpretation by Jørgensen, Keen, and Gøtzsche,[5] of the balance of benefits and harms to be scientifically unsound. Women would be better served by focusing efforts on how best, and not whether, to provide breast screening.

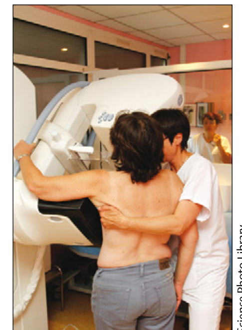
The signatories below, charged with provision and implementation of breast screening in many different countries, remain convinced that the scientific foundation for population-based, quality-assured, organised breast screening is one of the major accomplishments of the translation of clinical cancer research into public health practice. Early detection, in combination with appropriate treatment, significantly lowers breast cancer mortality and improves the life quality of patients with the disease.

We declare that we have no conflicts of interest.

*Karin Bock, Bettina Borisch, Jenny Cawson, Berit Damtjernhaug, Chris de Wolf, Peter Dean, Ard den Heeten, Gregory Doyle, Rosemary Fox, Alfonso Frigerio, Fiona Gilbert, Gerold Hecht, Walter Heindel, Sylvia Helen Heywang-Köbrunner, Roland Holland, Fran Jones, Anders Lernevall, Silvia Madai, Adrian Mairs, Jennifer Muller, Patric Nisbet, Ann O'Doherty, *Julietta Patnick, Nick Perry, Lisa Regitz-Jedermann, Mary Rickard, Vitor Rodrigues, Marco Rosselli Del Turco, Astrid Scharpantgen, Walter Schwartz, Brigitte Seradour, Per Skaane, Laszlo Tabar, Sven Tornberg, Giske Ursin, Erik Van Limbergen, Anne Vandenbroucke, Linda J Warren, Lee Warwick, Martin Yaffe, Marco Zappa*
julietta.patnick@cancerscreening.nhs.uk

National Reference Center South-West, Marburg, Germany (KB); Europa Donna: the European Breast Cancer Coalition, Milan, Italy (BB); St Vincent's BreastScreen, Fitzroy, VIC, Australia (JC); Norwegian Breast Cancer Screening Programme, Oslo, Norway (BD), Swiss Breast Cancer Screening Federation, Bern, Switzerland (CdW); Turku University Hospital, Turku, Finland (PD); Expertise and Training Center for Breast Cancer Screening, Nijmegen, Netherlands (AdH), National Committee—Canadian Breast Cancer Screening Initiative, Ottawa, ON, Canada (GD); Screening Division, Public Health Wales, Cardiff, UK (RF); Reference Centre for Quality Assurance, Regional Breast Cancer Screening Programme, Piemonte, Italy (AF); University of Aberdeen, Aberdeen, UK (FG); National Reference Center North, Oldenburg, Germany (GH); National Reference Center Münster, Münster, Germany (WH); National Reference Center Munich, Munich, Germany (SHH-K); EUREF Certification Programme of the German Population-Based Breast Screening Programme, Nijmegen, Netherlands (RH); Sydney Breast Clinic, Sydney, NSW, Australia (FJ); Breast Screening, Central Denmark Region, Arhus, Denmark (AL); MaMMa Healthcare Institute, Budapest, Hungary (SM); Northern Ireland Breast Screening Programme, Belfast, UK (AM); Cancer Screening Services, Queensland Health, Brisbane, QLD, Australia (JM); Jersey Breast Screening Service, St Helier, UK (PN); Breast Screening, Dublin, Ireland (AO'D); NHS Cancer Screening Programmes, Sheffield S10 3TH, UK (JP); European Guidelines for Quality Assurance in Breast Cancer Screening and Diagnosis, London, UK (NP); National Reference Center Berlin, Berlin, Germany (LR-J); Faculty of Health Sciences, Sydney University, Sydney, NSW, Australia (MR); Portuguese Central Region Breast Cancer Screening Programme, Coimbra, Portugal (VR); EUREF, Florence, Italy (MRDT); Programmes Prévention Cancer, Luxembourg, Luxembourg (AS); Mammography Centre, Odense Universitetshospital, Odense, Denmark (WS); Programme National de Dépistage, Marseille, France (BS); Mammography Screening, Oslo, Norway (PS); Department of Mammography, Falun Central Hospital, Falun, Sweden (LT); Stockholm Gotland Regional Cancer Screening Programmes, Stockholm, Sweden (ST); Cancer Registry of Norway, Oslo, Norway (GU); LUCK: Louvain University Centre for Cancer Prevention, Louvain, Belgium (EVL); Cancer Screening, Wallonia, Belgium (AV); Screening Mammography Program of British Columbia, University of British Columbia, Vancouver, BC, Canada (LJW); BreastScreen NSW, Eveleigh, NSW, Australia (LW); Imaging Research Program, Ontario Institute for Cancer Research, Toronto, ON, Canada (MY); and Italian National Centre for Screening Monitoring, Florence, Italy (MZ)

1 Gøtzsche P. Screening for colorectal cancer. *Lancet* 1997; **349:** 356.
2 Lawrence G, Kearins O, Lagord C, et al. Second all breast cancer report, June 2011. http://www.ncin.org.uk/view.aspx?rid=612 (accessed Nov 4, 2011).
3 International Agency for Research on Cancer. Breast cancer screening. IARC handbook of cancer prevention volume 7. Lyon: IARC press, 2002. http://www.iarc.fr/en/publications/pdfs-online/prev/handbook7/index.php (accessed Nov 4, 2011).


Science Photo Library

See **Editorial** page 1758

Submissions should be made via our electronic submission system at http://ees.elsevier.com/thelancet/

4 Perry N, Broeders M, de Wolf C, Törnberg S, Holland R, von Karsa L. European guidelines for quality assurance in breast cancer screening and diagnosis. Fourth edition—summary document. *Ann Oncol* 2008; **19:** 614–22.
5 Jørgensen KJ, Keen JD, Gøtzsche PC. Is mammographic screening justifiable considering its substantial overdiagnosis rate and minor effect on mortality? *Radiology* 2011; **260:** 621–27.

Leadership and public health

Richard Horton's rant about leadership in public health (Sept 17, p 1060)[1] was entertaining, but was based on anecdote rather than evidence, and parted company with reality early on.

Public health, at heart, is the art of the practical. It is about making things happen, not just making noise. Sound and fury achieve very little; dialogue and determination, grounded in fact and reality, change minds and lives.

The UK Faculty of Public Health (FPH) cherishes its independence of government, which enables it to lead on several of fronts. We set standards for the professional workforce, we articulate a public health vision for the UK, and we are engaging strongly in the current reforms to ensure that there is strong public health leadership in England.

FPH takes pride in its professional and scientific approach to policy and advocacy. We deal with evidence and fact, and strongly refute the suggestion that we have become "unconsciously anti-science".

Horton complains that we are too close to government. To use our influence effectively, we must have dialogue with government. Our role is to challenge where necessary and support where appropriate. It would be a dereliction of duty not to engage with the government over the health reforms, and we have our members' strong support to do this.

We and other respected national organisations continue to take part in the Responsibility Deal discussions[2] because, although these can at best make a minor contribution to the public health issues they address, we think it is worth trying to maximise their effect on health. We are insisting on robust monitoring and assessment, and we will continue to demand comprehensive strategies and to lobby for regulation—including a ban on *trans* fats and a minimum unit price for alcohol.

In these challenging times for public health, we must present a united front. Trainees are right to be concerned for the future, and we must all do everything we can to support them. Public health leaders in the UK are working hard, together, to get the new system right, and we cannot allow the frustrations of a few to overshadow the concerns of most public health professionals.

I am President of the Faculty of Public Health.

Lindsey Davies
liznightingale@fph.org.uk

Faculty of Public Health, London NW1 4LB, UK

1 Horton R. Offline: Where is public health leadership in England? *Lancet* 2011; **378**: 1060.
2 Department of Health. Responsibility Deal partners. http://responsibilitydeal.dh.gov.uk/ (accessed Nov 1, 2011).

The Lancet's recognition of threats to the public's health from current UK Government policy and the National Health Service reorganisation[1] is welcome, but its criticism of leadership in the Faculty of Public Health by use of selective quotes from a private Yahoo group of trainees is unfair, unwarranted, and unhelpful.

Trainees have sufficient representation at every level of the Faculty of Public Health and fully support the Faculty's leadership and professional approach in designing a stronger public health system. The Government's Responsibility Deal is a flawed process but the Faculty would have achieved little by a posturing withdrawal and has, with approval of its Board, been influential in consistently providing evidence for the case that voluntary agreements with industry are insufficient and must be complemented by appropriate use of regulatory powers.

The Faculty's coordination of evidence and expertise on the current reorganisation of the public health system is firmly based in science and is significantly ameliorating public health policy and organisation in the face of political irresponsibility. The current challenges demand a united response from all parts of the public health community; *The Lancet* should direct its attention towards positive contributions to public health reform rather than attempting to undermine those who are immersed in the reality of imposed change.

FA is President of the Association of Directors of Public Health (ADPH). SK is Chair of the Public Health Specialty Registrars Committee of the Faculty of Public Health (FPH). ADPH, in common with FPH, is seeking to bring an evidence-based approach to the UK Government's Responsibility Deal.

**Frank Atherton, Sakthi Karunanithi*
frank_atherton@yahoo.com

Association of Directors of Public Health, Cambridge CB2 8FH, UK (FA); and Public Health Specialty Registrars Committee, Faculty of Public Health, London, UK (SK)

1 Horton R. Offline: Where is public health leadership in England? *Lancet* 2011; **378**: 1060.

Richard Horton's Offline[1] refers to the UK Government's Responsibility Deal as "corrupt". This is an unfair characterisation of a potentially valuable intervention to tackle the epidemic of obesity and inactivity in the UK.[2]

We have been assessing a similar project based in the East Midlands, UK, which has brought together private, public, and voluntary-sector organisations to work together to address obesity and inactivity in the area.[3] We have found a great deal of enthusiasm and willingness to address the issues of obesity and inactivity from all types of organisations, and recognition that unless these issues are effectively addressed that they will begin to affect the productivity of the UK and their own organisations. There is nonetheless some important learning from the project that could usefully be applied to