

Cancer and cardiovascular disease: more tightly linked than by chance

The principle that prevention of cardiovascular disease could be linked with prevention of cancer has received strong support from trials assessing the daily use of aspirin, which besides its well known reduction of cardiovascular disease (CVD) reduces the incidence of cancer and metastases.¹ This overall benefit in decreasing cancer is unfortunately offset by the adverse side-effects of aspirin on gastrointestinal bleeding.²

Epidemiologically, a healthy lifestyle lessens the risk of both cardiovascular disease and cancer, as first found in the Nurses' Health study.³ In the ARIC study,⁴ seven so-called ideal health metrics in 13 753 people were associated with decreased diagnoses of cancer. Four of these ideal health metrics are never-smoking or quitting smoking more than 12 months ago, having a body-mass index of less than 25 kg/m², having four or five components of a healthy diet score, and doing 75 min or more per week of vigorous physical activity (or 150 min per week of moderate or moderate and vigorous activity). The three other ideal health metrics are an untreated total cholesterol of less than 200 mg/dL, an untreated blood pressure of less than 120/80 mm Hg, and an untreated fasting serum glucose of less than 100 mg/dL. The trend towards decreased cancer incidence with high numbers of ideal health metrics was highly significant ($p_{\text{trend}} < 0.0001$).⁴

When adjusting for age, sex, ethnic origin, and study centre, the trend of lower cancer incidence with higher numbers of ideal health metrics was statistically significant ($p_{\text{trend}} < 0.0001$).⁴ When the smoking metric was removed (resulting in a possible six ideal health metrics for each person), the trend of lower cancer incidence with a large number of ideal health metrics was attenuated; people with three ideal

health metrics had 2% lower risk of incident cancer and participants with five or six ideal health metrics had 25% lower risk of incident cancer than did those with no ideal health metrics. Although the association of ideal health metrics with new CVD was stronger than that for combined cancer, having six or more ideal health metrics was associated with a 51% reduction in cancer risk.

I declare no competing interests.

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- 1 Algra AM, Rothwell PM. Effects of regular aspirin on long-term cancer incidence and metastasis: a systematic comparison of evidence from observational studies versus randomised trials. *Lancet Oncol* 2012; **13**: 518–27.
- 2 van Kruijsdijk RC, Visseren FL, Ridker PM, et al. Individualised prediction of alternate-day aspirin treatment effects on the combined risk of cancer, cardiovascular disease, and gastrointestinal bleeding in healthy women. *Heart* 2015; **101**: 369–76.
- 3 van Dam RM, Li T, Spiegelman D, Franco OH, Hu FB. Combined impact of lifestyle factors on mortality: prospective cohort study in US women. *BMJ* 2008; **337**: a1440.
- 4 Rasmussen-Torvik LJ, Shay CM, Abramson JG, et al. Ideal cardiovascular health is inversely associated with incident cancer: the Atherosclerosis Risk In Communities study. *Circulation* 2013; **127**: 1270–75.

Integrity and the European Society of Cardiology—reply

The European Society of Cardiology (ESC) wishes to address the points raised by John Martin (Jan 24, p 328)¹ and would like to clarify the following issues.

First, the ESC, which represents more than 80 000 health-care professionals in cardiovascular medicine, is one of the few organisations of its kind to have implemented strict policies to manage the relationship with industry partners.² One measure to guarantee complete transparency is the enforcement of yearly Declarations of Interest (DOIs) from each and every

volunteer—including the ESC Board and past ESC Presidents—all of which are reviewed under the guidance and by the Audit Committee of the ESC. For ESC congresses specifically, any collaboration between the ESC and third parties adheres to robust rules—Guidelines for Industry Participation. Furthermore, all presenters at the ESC Congress, or ESC subspecialty congresses, must openly declare any relevant interest. These DOIs are shown to the audience (delegates or media) and included within the slide presentations that are subsequently posted online. The DOIs are therefore public, as are those of ESC Guidelines task force members, whose DOIs are published on the ESC website.

At the ESC Congress 2014, Servier was one of 210 exhibiting companies. Displaying of sponsor logos alongside the society's own logo is standard practice among all key professional organisations in the health-care field. We are grateful to John Martin for pointing out that the design of the smart phone application could have been misinterpreted by some people, and we are taking steps to review the design of future initiatives.

FJP is President of the ESC and reports personal fees from AstraZeneca, Bayer, Biotronik, Boehringer Ingelheim, Medtronic, Menarini, and Servier.

Fausto J Pinto, on behalf of the European Society of Cardiology Board
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- 1 Martin J. Integrity and the European Society of Cardiology. *Lancet* 2015; **385**: 328.
- 2 ESC Board. Relations between professional medical associations and the health-care industry, concerning scientific communication and continuing medical education: a Policy Statement from the European Society of Cardiology. *Eur Heart J* 2012; **33**: 666–74.

Department of Error

Quaresma M, Coleman MP, Rachet B. 40-year trends in an index of survival for all cancers combined and survival adjusted for age and sex for each cancer in England and Wales, 1971–2011: a population-based study. *Lancet* 2015; **385**: 1206–18—In figure 4, the unlabelled points have been removed. This correction has been made to the online version as of March 27, 2015, and the printed Article is correct.

For the Guidelines for Industry Participation see <http://www.essexhibition.org/ESCcongress2014/default.aspx>



For the ESC Board 2014–16 and disclosure see appendix