

Making Sense of Screening **Harriet Ball**

Screening is a good thing, right? Most people seem to think it is, including the asymptomatic middle-aged man who recently came to ask me (as his GP) to “test him for cancer”. Hmm, where to start? How to explain to him that (aside from the straightforward difficulty that there are so many cancers) such an idea might actually cause him more harm than if he’d just stayed at home? And if I do manage to convince him, won’t he later assume I was just pulling the wool over his eyes in order to save my time or the NHS’s resources?

Screening is different to other interventions we use as doctors, because we start with a patient who does not have a medical complaint. This is important for two reasons. First, we have to ensure the balance of benefits to harms is very good indeed (because even a small harm is hard to justify to a person who was previously perfectly well). Second, in an asymptomatic population, the prevalence of disease is likely to be lower. Therefore a test that might be effective for high risk patients leads to more false positives (overdiagnosis and false alarms) in those who are healthy, potentially causing more harm than good.

This complex situation is worsened by media messages that do not question the overall impact (including risks related to [overdiagnosis](#), [overtreatment](#), and opportunity costs). “Earlier diagnosis leads to better outcomes” may not be true if the disease in question is a cancer so slow-growing that it would never have impacted on your life. And, as Margaret McCartney has pointed out relating to NHS health checks, [perhaps there are even political influences](#) on projects that look to medicine for ownership of problems related to inequality, rather than looking at societal problems.

The bottom line is, screening programmes need evidence every bit as much as in the rest of medicine. And it is often lacking. But nonetheless there are continued calls for more screening, and unrealistic expectations of the programmes that currently exist. Sense About Science have just released an updated version of [Making Sense of Screening](#) that sets out to explain the issues. This is a useful read for doctors and students to brush up, and you can request print copies to hand out in clinics. Where there is uncertainty about the existence or scale of overall benefits, there is a great need for people to be told this before they participate, in order to gain proper consent. But until recently the NHS information leaflet on breast cancer screening was felt to be inadequately explaining these risks, and so had to be revised. There are also some useful interactive tools on the [Understanding Uncertainty](#) site that can help you explore and explain such risk to a patient. Because often, communicating the nub of these issues is a lot more difficult than just ordering the test. But going down that route is not as benign as you might think.



Diagram from the Sense about Science leaflet, p11 – explaining how in a screening test with 95% accuracy, a positive result indicates underlying disease only 28% of the time.