

Supplementary 1. Participant descriptions of overdiagnosis and overtreatment

Participant	Description of overdiagnosis	Description of overtreatment
P1	The diagnosis of a condition that would not cause the person problems if left undetected	Treating a condition more aggressively than is required to manage the condition taking account of the side effects of the treatment(s) on health and quality of life
P2	Diagnosing as disease needing treatment a situation in which no action is the preferred treatment since health and mortality are not affected and in which treatment itself causes harm to the patient	When LESS or NO treatment achieves the same or a more desirable outcome and especially when treatment does not decrease mortality
P3	Identifying or treating things that will likely never become a problem in one's lifetime	Providing intervention for something that likely will never cause problems in a lifetime
P4	As technology has improved, mammograms are now picking up calcium deposit in the breast that may not have previously been detected, with current guidelines and pathology results from biopsies, even at low grade cancer, in the UK the recommendation will be lumpectomy, breast conserving surgery or in my case as I have multifocal DCIS, a mastectomy. Some clinicians consider that such procedures may well represent overdiagnosis/overtreatment	Not only is overtreatment the actual surgery, but also the follow on radiotherapy. It is currently unclear what the outcomes are if surgery is not elected and how this compares to those who elect treatment, as more comparative studies are required to help establish if this is overtreatment or not, for cancers of low grade which are "contained"
P5	The diagnosis of a condition that might not lead to harm within one's natural lifespan	Being treated for a condition - possibly unnecessarily - because it's not possible to know if the condition would progress or not if left untreated
P6	Cancerous cells found on screening that will not cause symptoms or death. This leads to and harms including physical, emotional and financial	Treatment that brings harms but offers no survival benefit or improvement in quality of life
P7	There are studies that show that more detection has not resulted in a decrease in malignant breast cancers, therefore early detection is likely causing	Overtreatment is treating cancers that may never (or so slowly) have developed into anything that affected mortality. For example studies show that mortality is not

	overtreatment to a number of women whose cancer would never have become malignant	any better for those DCIS patients receiving standard of care treatment versus those not receiving this treatment
P8	Routine mammograms often pick up small cysts or tumours which left alone our immune systems would probably get rid of. Overdetection means a lot of women are undergoing unnecessary surgical interventions and treatments	Putting women through unnecessary surgical interventions, external beam radiotherapy, adjacent chemotherapy for very small tumours that the body could probably deal with on its own. I think it's a case of doctors being overcautious, playing safe and not weighing up the side effects of these treatments which can be life changing for a lot of women
P9	Overdiagnosis is giving the patient treatment beyond immediate needs: i.e. assuming the worst case scenario when in fact a discovered tumour may not progress or require anything other than monitoring	Overtreatment, in my case, would have been to allow the locum breast surgeon who first saw me to do what he said I so should have ie: a double mastectomy asap.
P10	Overdetection is, for example, when a mammogram picks up something that frequently is not a problem, but because it is identified and treated as cancer becomes a problem for the woman. She may have been better off not knowing about it. Sometimes, because of various factors, the solution is worse than the perceived problem.	When the treatment does more damage than the problem itself would have caused
P11	The detection of cancerous changes which would not develop into illness before death from other causes if left alone	Treatment of findings that would not have presented with symptoms or caused illness if not treated, or which does not lengthen life or improve quality over leaving treatment till symptoms develop
P12	Overdiagnosis means the detection, usually leading to overtreatment, of a condition, which if left undetected, would not have caused a problem in the person's lifetime	Unnecessary treatment of a condition, sometimes identified through overdiagnosis. The treatment may do harm (iatrogenic) and is wasteful of resources