

Clinical/diagnostic problem	Investigation	Dose	Recommendation [Grade]	Comment
<b>Asymptomatic patients</b>				
Screening women <40 years old B01	Mammography	♣	Not indicated [B]	There is no evidence to support screening of women <40 years old who are not at increased risk from breast cancer.
Screening women 40–49 years old (See also B05) B02	Mammography	♣	Indicated only in specific circumstances [A]	Women seeking screening at this age should be made aware of the risks and benefits.
	US	None	Indicated only in specific circumstances [A]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with dense breasts and in those with implants.
Screening women 50–70 years old B03	Mammography	♣	Indicated [A]	Women aged 50–70 are invited for screening at 3-yearly intervals under the UK NHS Breast Screening Programme.
	US	None	Indicated only in specific circumstances [B]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with dense breasts and in those with implants.
Screening women >70 years old B04	Mammography	♣	Indicated [A]	Women over 70 years may self-refer through the screening programme.
	US	None	Indicated only in specific circumstances [B]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with dense breasts and in those with implants.
Family history of breast cancer (See also B02) B05	Mammography	♣	Specialised investigation [B]	Women with a moderate to high risk of breast cancer based on family history should be referred to a specialist breast clinic for guidance regarding their risk. Screening should only be undertaken after genetic risk assessments and counselling on the risks and benefits have taken place, in accordance with NICE guidance on familial breast cancer.
	US	None	Indicated only in specific circumstances [B]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with dense breasts and in those with implants.
	MRI	None	Specialised investigation [B]	Recent studies have shown that MRI is more sensitive than mammography in detecting breast cancer in patients with a family history of breast cancer. Its effect, if any, on mortality reduction and cost-effectiveness is not proven. MR screening should only be considered in women with a high-risk family history referred from specialist tertiary care centres.

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Women <50 years old having HRT or being considered for HRT  <b>B06</b>	Mammography	♣	Indicated only in specific circumstances [C]	HRT has been shown to increase density and incidence of benign changes within the breast. There is a subsequent reduction in screening sensitivity and specificity and an increase in screening recall rate. There is no evidence for routine mammography before start of HRT.
	US	None	Indicated only in specific circumstances [B]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with dense breasts and in those with implants.
Breast screening in women ≥50 years old who have had augmentation mammoplasty  <b>B07</b>	Mammography	♣	Indicated [B]	Sensitivity for cancer detection is lower than in the non-augmented breast.
	US	None	Indicated only in specific circumstances [B]	There is no evidence that US screening reduces mortality from breast cancer. It may be a useful adjunct to mammography in women with implants.
<b>Symptomatic patients</b>				
Clinical suspicion of carcinoma (eg, breast lump, new nipple retraction, skin tethering or suspected Paget's disease of the nipple)  (See also B09)  <b>B08</b>	Mammography	♣	Indicated [B]	Referral to a breast clinic should precede any radiological investigation. Mammography and US should be used in the context of triple assessment (ie, clinical, imaging and pathology). Mammography is appropriate for women >35 years old.
	US	None	Indicated [B]	For women <35 years old, US is the imaging investigation of first choice when performed in the context of triple assessment at a specialist clinic.
	MRI	None	Specialised investigation [B]	MRI may provide useful additional staging information where disease extent is unclear on standard triple assessment.
	NM	♣♣♣♣	Specialised investigation [A]	Scintimammography should take place only when additional information is needed after triple assessment—eg, if there is a disagreement between imaging and pathology.
Clinical suspicion of carcinoma in patients with augmentation mammoplasty  (See also B08)  <b>B09</b>	Mammography	♣	Indicated [B]	Mammography is indicated when there is clinical suspicion of carcinoma in women with implants.

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Breast cancer staging  <b>B10</b>	Mammography/ CXR/ US/ NM/ CT	♣♣ None ♣♣♣♣ ♣♣♣♣	Indicated [C]	Local staging is with mammography and US. MRI is reserved for problem solving. Staging for distant metastases is with bone scintigraphy, CXR and liver US, or CT of the chest/abdomen. The staging strategy is usually decided by the local multidisciplinary team (MDT).
	MRI	None	Indicated only in specific circumstances [C]	
Breast cancer follow-up (surveillance)  <b>B11</b>	Mammography/ US/ MRI/ NM	♣♣ None None ♣♣♣♣	Indicated [A]	Mammography, US, and MRI may all be used for follow-up of the conserved breast. In suspected locoregional recurrence the principles of triple assessment apply. Occasionally, scintimammography may have a role.
Generalised lumpiness, pain or tenderness, or longstanding nipple retraction  <b>B12</b>	Mammography	♣♣	Not indicated initially [C]	Mammography may be worthwhile in women >40 years old with persisting non-suspicious breast symptoms.
	US	None	Indicated only in specific circumstances [C]	In the absence of other signs suggestive of malignancy, breast US is unlikely to affect management.
Cyclical mastalgia  <b>B13</b>	Mammography	♣♣	Not indicated [B]	Neither mammography nor US should be performed in women with breast pain in the absence of clinical signs.
	US	None	Not indicated [B]	
Breast inflammation  <b>B14</b>	US	None	Indicated [C]	US is useful for follow-up and for guidance in abscess drainage.
	Mammography	♣♣	Specialised investigation [C]	Useful in the diagnosis or exclusion of malignancy when there is clinical doubt.
Assessment of integrity of silicone breast implants  <b>B15</b>	US + MRI	None None	Specialised investigation [B]	US is quick and simple and a normal US study is highly predictive of an intact implant. Symptomatic women with implants >10 years old and with positive US findings have a high probability of rupture. MRI is occasionally used.

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