

Supplemental Screening Summary for BreastScreen NSW Eligible Clients							
Modality	Benefits	Limitations	Available at BSNSW for screening	Available at BSNSW for assessment (client recalled from screening for further tests)	Requires GP referral for screening	IV Contrast Media required for examination	Radiation exposure
2D Mammography (BreastScreen NSW)	<ul style="list-style-type: none"> -Current population screening standard of care -Self referred -No cost for client -Double blind reading for screening program 	<ul style="list-style-type: none"> -Reduced sensitivity for extremely dense breasts 	Y	Y	N	N	Y
3D Mammography	<ul style="list-style-type: none"> -Increased cancer detection rates for whole population -Generally accessible in diagnostic imaging services 	<ul style="list-style-type: none"> -Radiation exposure -Extremely dense breasts can be challenging to interpret -Potential out of pocket expense 	N	Y	Y	N	Y
Breast Ultrasound	<ul style="list-style-type: none"> -No radiation -Accessible with GP referral -Complementary modality to mammography - potential to detect mammographically occult cancer -Generally accessible diagnostic imaging services 	<ul style="list-style-type: none"> -Increased investigation of benign disease and benign biopsies -Operator dependant 	N	Y	Y	N	N
ABUS (Automated Breast Ultrasound)	<ul style="list-style-type: none"> -No radiation -Accessible with GP referral in Sydney -Complementary modality to mammography - potential to detect mammographically occult cancer 	<ul style="list-style-type: none"> -Increased investigation of benign disease and benign biopsies -Limited availability 	N	N	Y	N	N
Contrast Enhanced Mammography	<ul style="list-style-type: none"> -High cancer detection rate -Increased sensitivity for dense breasts 	<ul style="list-style-type: none"> -Iodinated contrast media risks including allergy, renal toxicity and extravasation -Limited availability, emerging modality -Increased radiation dose to 3D mammography alone -Interpretation can be limited by background breast parenchymal enhancement -No specific Medicare item number, can incur higher out of pocket expense 	N	N	Y	Y	Y
Breast MRI	<ul style="list-style-type: none"> - Higher cancer detection rate compared to mammography alone 	<ul style="list-style-type: none"> -Potential significant out of pocket expense -Limited availability -Increased investigation of benign disease and benign biopsies -Interpretation can be limited by background breast parenchymal enhancement -Contrast media considerations, i.e cumulative gadolinium exposure -People with limited mobility can find positioning difficult -Contraindications for claustrophobia and those with metallic implantable devices 	N	N	Y -Specialist referral required for Medicare rebate	Y	N
UltraFast Breast MRI and Abbreviated Breast MRI A6:A9	<ul style="list-style-type: none"> - Higher cancer detection rate compared to mammography alone -Non contrast protocols used in some institutions -Fast acquisition time relative to standard Breast MRI -Greater potential for screening 	<ul style="list-style-type: none"> -Potential significant out of pocket expense -Limited availability -Increased investigation of benign disease and benign biopsies -Interpretation can be limited by background breast parenchymal enhancement -People with limited mobility can find positioning difficult -Contraindications for claustrophobia and those with metallic implantable devices -Contrast media considerations, i.e cumulative gadolinium exposure 	N	N	Y -Specialist referral required for Medicare rebate	Y	N

References

Houssami, N., Lockie, D., Clemson, M., Pridmore, V., Taylor, D., Marr, G., Evans, J. and Macaskill, P. (2019). Pilot trial of digital breast tomosynthesis (3D mammography) for population-based screening in BreastScreen Victoria. Med. J. Aust., 211: 357-362. <https://doi.org/10.5694/mja2.50320>

Anders Tingberg, Victor Dahlblom, Magnus Dustler, Daniel Förrvik, Kristin Johnson, Pontus Timberg, Sophia Zackrisson, "Our journey toward implementation of digital breast tomosynthesis in breast cancer screening: the Malmö Breast Tomosynthesis Screening Project," J. Med. Imag. 12(S1) S13006 (24 October 2024) <https://doi.org/10.1117/1.JMI.12.S1.S13006>

Noam Nissan, Rosa Elena Ochoa Albiztegui, Hila Fruchtman-Brot, Jill Gluskin, Yuki Arita, Tali Amir, Jeffrey S. Reiner, Kimberly Feigin, Victoria L Mango, Maxine S. Jochelson, Janice S. Sung,Extremely dense breasts: A comprehensive review of increased cancer risk and supplementary screening methods,European Journal of Radiology,Volume 182,2025,111837.<https://doi.org/10.1016/j.ejrad.2024.111837>.

N. Aristokli, I. Polycarpou, S.C. Themistocleous, D. Sophocleous, I. Mamais,Comparison of the diagnostic performance of Magnetic Resonance Imaging (MRI), ultrasound and mammography for detection of breast cancer based on tumor type, breast density and patient's history: A review,Radiography,Volume 28, Issue 3,2022,Pages 848-856,<https://doi.org/10.1016/j.radi.2022.01.006>.

Amitai, Y., Freitas, V. A., Golan, O., Kessner, R., Shalmon, T., Neeman, R., ... & Menes, T. S. (2024). The diagnostic performance of ultrafast MRI to differentiate benign from malignant breast lesions: a systematic review and meta-analysis. European Radiology, 34(10), 6285-6295.

Mann, R. M., Athanasiou, A., Baltzer, P. A., Camps-Herrero, J., Clauser, P., Fallenberg, E. M., ... & European Society of Breast Imaging (EUSOBI). (2022). Breast cancer screening in women with extremely dense breasts recommendations of the European Society of Breast Imaging (EUSOBI). European radiology, 32(6), 4036-4045.