Clinical Practice, Research and Media Support of AB-MRI Screening – 2014-2020

2014 -- Kuhl C, Schrading S, et al. Abbreviated Breast Magnetic Resonance Imaging (MRI)... https://ascopubs.org/doi/full/10.1200/JCO.2013.52.5386

"MRI acquisition ... of 3 minutes and an expert radiologist MIP image reading ... of 3 seconds ... establish the absence of ... cancer... [with accuracy equivalent] to ... FDP and ... an additional ... yield of [18.2/1000]."

2015 -- Mango V, Morris E, et al. Abbreviated protocol for breast MRI: are multiple sequences ...

https://pubmed.ncbi.nlm.nih.gov/25454099/

"An abbreviated breast MRI protocol allows detection of breast carcinoma. One pre and post-contrast T1W sequence may be adequate for detecting breast carcinoma."

2016 -- Harvey SC, Di Carlo PA, et al. An Abbreviated Protocol for High-Risk Screening Breast MRI Saves ... https://www.jacr.org/article/S1546-1440(16)30940-1/abstract

"Abbreviated MRI is as effective as full-protocol MRI ... [allowing] for ... improved radiologist time management and workflow, with the potential to add real-time MRI interpretation or double reading."

2017 -- Chhor C, Mercado C. Abbreviated MRI Protocols: Wave of the Future for Breast Cancer .

https://www.ajronline.org/doi/full/10.2214/AJR.16.17205.

"Abbreviated breast MRI protocols have been proposed as a way of achieving efficiency and rapid throughput ...[increasing availability and providing] women with greater access to breast MRI."

2018 -- Pinker-Domenig K, Morris EA. **The Emerging Role and Value of Abbreviated Breast MRI** | Memorial . https://www.mskcc.org/clinical-updates/emerging-role-and-value-abbreviated-breast-mri.

"Abbreviated breast magnetic resonance imaging is a cost-effective screening tool that should be made available to patients with an average lifetime risk of breast cancer, according to our recent review of protocols."

2019 -- _Aubrey A. 'Mini' MRI Outperforms 3-D Mammograms In Detecting Cancer In Women ...

<u>www.npr.org/2020/02/25/809368250/mini-mri-outperforms-3-d-mammograms-in-detecting-cancer-in-women-with-dense-brea</u>. "Sloan Kettering reports even 3D mammograms are 250% LESS EFFECTIVE than 'mini' MRIs."

2019 -- Mootz A, Madhuranthakam A, et al. Changing Paradigms in Breast Cancer Screening: Abbreviated ... https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6385725/.

"Given its superior performance and the greatly reduced scan times ... AB-MRI has the potential to replace mammography as a stand-alone imaging tool for the detection of breast cancer..."

2019 -- Walter M. 4 steps to implementing abbreviated breast MRI screening ...

https://www.radiologybusiness.com/topics/imaging-informatics/4-steps-abbreviated-breast-mri-screening-arrs

"The [AB-MRI is] a self-pay procedure, ... because there is no CPT code ... price is substantially lower than ... the [FB-MRI]... patients with [high-deductibles] have a lower out-of-pocket expense for [AB-MRI] than for [FB-MRI]."

2020 -- Comstock C, Gatsonis C, et al. **Comparison of Abbreviated Breast MRI vs Digital Breast Tomosynthesis (DBT).** <u>https://jamanetwork.com/journals/jama/article-abstract/2761645</u>

"... [AB-MRI], compared with DBT, [had] a significantly higher rate of invasive breast cancer detection." 2020 -- Moffitt Cancer Center. Ensure Access to Tailored Breast Screening. https://moffitt.org/for-healthcare-professionals/clinical-programs-and-services/breast-oncology-

program/treatments-services/abbreviated-breast-mri/

"... [AB-MRI identified] significantly more invasive breast cancers [and DCIS] ... in women with dense breasts ... as compared to [DBT] ... the ... predictive value is ... considered acceptable for screening mammography."

2020 -- Weinstein S, Korhonen K, et al. **Abbreviated Breast Magnetic Resonance Imaging for Supplemental...** <u>https://ascopubs.org/doi/abs/10.1200/JCO.19.02198</u>.

"Preliminary results ... of screening AB-MR resulted in a CDR of 27.4/1,000 at the patient level after DBT ..." 2020 -- Young Y A, Sung H K, et al. Feasibility of abbreviated magnetic resonance imaging (AB-MRI)... https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0230347

"AB-MRI improved cancer detection with a high specificity, sensitivity and PPV in women with a PH of breast cancer. AB-MRI could be a useful screening tool ... considering its high ... performance and short ... time." Application a9957723 References 1 of 2

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2021 – Baxter G, Selamoglu A, et al. **A meta-analysis comparing the diagnostic performance of abbreviated MRI...** https://www.sciencedirect.com/science/article/pii/S0009926020303974

"[AB-MRI] diagnostic performance ... matches [FB-MRI]... [and the] time of [AB-MRI] is significantly reduced." 2021 -- University Hospitals. An Early Adopter of Abbreviated Breast MRI, UH Posts Noteworthy Results https://www.uhhospitals.org/for-clinicians/articles-and-news/articles/2021/02/uh-posts-noteworthy-early-resultsprogram-has-identified-19-9-breast-cancers-per-1000-studies.

"Abbreviated breast MRI overcomes the limitations of cost and scanner time when considering screening patients at average or slightly elevated risk,"

2021 -- Lee AY. RSNA Journal Sustained Benefits of Abbreviated Breast MRI on Consecutive Screening Rounds. https://pubs.rsna.org/doi/abs/10.1148/radiol.2021210018

"...the abbreviated protocol ... demonstrated significant time saved and in image acquisition and interpretation, with sensitivity for cancer equivalent to that with the full protocol screening MRI examination."

2021 – Kwon MR, Choi JS, et al. **Breast Cancer Screening with Abbreviated Breast MRI: 3-year Outcome Analysis**. <u>https://pubmed.ncbi.nlm.nih.gov/33620293/</u>

"Screening outcome measures of abbreviated MRI were sustained without significant differences between 3 consecutive years. All cancers missed at abbreviated MRI were node-negative invasive cancers and tended to be smaller than detected cancers."

Future 'improved' AB-MRI Possibilities?

2021 – Image Technology News. MRI Measurement Could Avoid 30% of Breast Biopsies https://www.itnonline.com/content/simple-mri-measurement-could-avoid-30-breast-biopsies

"DWI is now well established in the diagnosis of stroke and is becoming increasingly popular in cancer diagnostics as well." – [diffusion-weighted imaging (DWI)].