

# Differential Access to Breast Magnetic Resonance Imaging Compared with Mammography and Ultrasound

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### Study Goal

- Examine the access to advanced imaging modalities through relative distance to breast MR facilities compared to facilities offering mammography or ultrasound.

### Study Population

- Cross-sectional study of 29,629 ZIP codes with an Area Deprivation Index (ADI) and known urbanicity
- Utilized 2023 data from the Food and Drug Administration and the American College of Radiology

### Key Outcome Measures

- Distance in miles to the nearest accredited breast imaging facility, with sub analysis by urbanicity, ADI quartile, and population size quartile.

### Key Findings

Mean distance was 65% less to mammography than MR facilities ( $p < 0.001$ ):

- Breast MR: 23.2 ± 25.1 miles
- Breast ultrasound: 22.2 ± 25.0 miles
- Mammography: 8.2 ± 8.3 miles

Increasing ADI quartile (becoming less advantaged) was associated with increased distance to the nearest facility. Compared to the most advantaged areas, the additional distance from the least advantaged areas to the nearest breast imaging facilities were:

- Breast MR: 12.2 additional miles
- Breast ultrasound: 11.5 additional miles
- Mammography: 2.4 additional miles

Small/rural areas were 23.2 additional miles to breast MR facilities and 3.52 additional miles to mammography facilities (as compared to urban areas)

### Conclusion

Access to mammography is substantially better than access to breast MR or ultrasound. Options to reduce the impact of differential access, including contrast-enhanced mammography, should be considered.

