

Mammography vs. MRI for Breast Examinations

Introduction

This electronic exhibit discusses the positives and negatives of using mammography and or MRI for breast examinations. Here are a list of bulleted points on the benefits and downfalls of each method of examination.

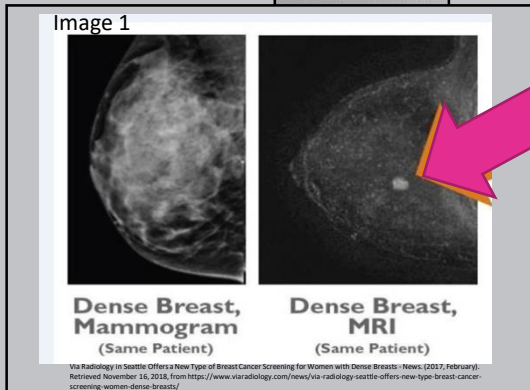
Benefits of Mammography

- More cost efficient than MRI
- Low amount of radiation used
- Can detect cancer at an early stage
- Good for an annual examination since lower cost and radiation exposure

Downfalls of Mammography

- Uncomfortable compressions
- Harder to examine women with dense breast tissue
- About half of women getting mammograms over a 10 year period will have at least one false positive finding
- Can't detect some cancers MRI can

Table 1	MRI		Mammography	
	The Netherlands	United Kingdom	The Netherlands	United Kingdom
Positives	13.7%	19.7%	6.0%	7.2%
Recalls	10.84%	10.7%	5.4%	3.9%
Biopsies	2.93%	3.08%	1.3%	1.33%
Cancers	1.04%	1.44%	0.46%	0.69%
False negatives	0.23%	0.43%	0.81%	1.52%



Benefits of MRI

- Good for examination of dense breasts
- Can detect cancerous as well as noncancerous lesions
- No compressing of the breast
- Good soft tissue contrast
- Can use gadolinium- based contrast agents which makes cancers and lesions more clear

Downfalls of MRI

- Takes 45 minutes for MRI examination
- Easier to mistake other findings as cancer which means unnecessary biopsies
- Can't detect some of the cancers mammography can
- Cost of exam
- Higher amounts of radiation being used

Conclusion

Table 1 represents the rates of detection and follow-up tests for screening with MRI compared with mammography. Its displaying the percentages for patients of the Netherlands and United Kingdom (Saslow, et. al,2007). Image 1 is showing dense breast tissue being examined by mammography and by MRI. The arrow is showing the cancerous area of the breast. The cancerous mass is obscured more in the mammo image then in the MRI image (ViaRadiology, 2017). The use of MRI vs. Mammography is very patient dependent.

References

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