

# **Bilateral and Multicentric Breast Carcinoma: Findings on Dynamic and High Spatial Resolution Breast MRI**

*Justin P Smith MD, Bruce A Porter MD, First Hill Diagnostic Imaging, Seattle, WA*

**Introduction:** The extent of tumor within the breast is the major determinant of whether breast conserving therapy (BCT) or simple mastectomy will be the preferred treatment. Owing to its high sensitivity, breast MRI is becoming an established means for detecting breast carcinoma. The appearance of multicentric and bilateral tumor by bilateral dynamic breast MRI at a community-based practice is reviewed.

**Materials and Methods:** 102 consecutive bilateral dynamic breast MRI cases acquired over 3 months were reviewed for multicentric, occult bilateral, or both forms of involvement. In selected cases, an FDA-approved computer assisted diagnostic system (*ACCENT* system, Confirma, Inc. Kirkland, WA) was used to emphasize areas of multicentric and bilateral tumor.

**Results:** 9/102(9%) cases of pathologically-confirmed multicentric and 1/102(1%) case of occult bilateral tumor were found.

**Conclusions:** Bilateral dynamic breast MRI is an emerging test for multicentric and bilateral breast carcinoma. These findings are relatively frequent and should be specifically addressed when interpreting breast MRI.

1. To understand the spectrum of appearances of multicentric and bilateral breast carcinoma using both dynamic contrast enhanced MRI and using high spatial resolution MRI of the breasts.
2. To understand the potential role for computer assisted diagnosis in discriminating between unicentric and multicentric carcinoma and between unilateral and bilateral breast carcinoma.

***For more information, please visit RSNA Educational Exhibit Number 0125BR-e in Hall D, Lakeside Center at McCormick Place.***