

# Perbedaan Temuan Morfologis Mamogram dan Gambar Ultrasonografi Payudara Pada Pasien Kanker Payudara disertai Metastasis Dengan Tanpa Metastasis di RSUPN Dr Cipto Mangunkusumo = The Differences in Morphological Findings of Mammograms and Breast Ultrasound Images in Breast Cancer Patients with Metastasis Compared to Without Metastasis at Dr Cipto Mangunkusumo General Hospital

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## Abstrak

Latar Belakang: Kanker payudara merupakan keganasan yang dapat bermetastasis ke kelenjar limfe aksila dan/atau organ jauh. Studi-studi sebelumnya menunjukkan terdapat kaitan antara sejumlah morfologi mamogram dan gambar ultrasonografi (USG) payudara dengan adanya metastasis kelenjar limfe. Seringkali pasien dengan kecurigaan kanker payudara diperiksa di rumah sakit ketika sudah dalam stadium lanjut atau bahkan terdapat metastasis yang seharusnya dapat dideteksi lebih awal. Mamografi dan USG payudara merupakan modalitas radiologis yang mudah untuk dikerjakan untuk diagnosis kanker payudara dan tersedia di banyak rumah sakit. Sampai saat ini, belum ada penelitian mengaitkan secara langsung temuan morfologis mamografi dan USG payudara pada pasien kanker payudara yang mengalami metastasis. Tujuan: Mengetahui perbedaan temuan morfologis mamografi dan USG payudara pada pasien kanker payudara dengan metastasis dengan pasien kanker payudara tanpa metastasis di RSUPN Dr. Cipto Mangunkusumo (RSCM). Metode: Dilakukan pembacaan ulang hasil mamogram dan gambar USG payudara dari 112 pasien yang didapatkan dari sistem Picture Archiving and Communication System (PACS) di Departemen Radiologi RSCM dengan klinis karsinoma payudara berdasarkan patologi anatomi. Data riwayat pasien didapatkan dengan melihat catatan di rekam medis melalui Electronic Health Record (HER) atau Hospital Information System (HIS). Dilakukan analisis pada usia dan karakteristik morfologis lesi meliputi variabel bentuk lesi, ukuran terbesar lesi, jarak tumor ke kutis, adanya kalsifikasi, jenis kalsifikasi, distribusi kalsifikasi, dan adanya distorsi arsitektur pada mamogram, dan bentuk lesi, ukuran terbesar lesi, jarak tumor ke kutis, vaskularisasi lesi, adanya kalsifikasi, dan adanya distorsi arsitektur pada gambar USG payudara menggunakan uji Chi-Square atau Fisher. Dilakukan juga analisis multivariat regresi logistik pada variabel yang signifikan secara statistik menggunakan metode backward yang disajikan dalam bentuk odds ratio (OR). Hasil: Terdapat perbedaan yang bermakna secara statistik pada variabel usia ( $p=0,032$ ), ukuran terbesar lesi pada mamogram ( $p<0,001$ ), jarak tumor ke kutis pada mamogram ( $p<0,001$ ), ukuran terbesar lesi pada gambar USG payudara ( $p<0,001$ ), dan jarak tumor ke kutis pada gambar USG payudara ( $p=0,001$ ) antara pasien kanker payudara dengan metastasis dengan tanpa metastasis. Pada analisis multivariat gabungan temuan morfologis mamogram dan gambar USG payudara, didapatkan perbedaan bermakna secara statistik pada ukuran terbesar lesi pada mamogram dengan nilai OR 3,73 ( $p=0,003$ ) dan jarak tumor ke kutis pada mamogram dengan nilai OR 3,34 ( $p=0,006$ ). Simpulan: Terdapat perbedaan bermakna temuan mamogram dan USG payudara yaitu masing-masing ukuran terbesar lesi  $>5$  cm dan jarak tumor ke kutis 0,5 cm dengan adanya metastasis pada kanker payudara. Temuan ukuran terbesar lesi  $>5$  cm dan jarak tumor ke kutis 0,5 cm pada mamogram dapat memprediksi kemungkinan terjadinya metastasis pada kanker payudara. ....Background: Breast cancer is a malignancy that can metastasize to axillary lymph nodes and distant

organs. Previous studies have shown an association between the morphological findings of mammograms and ultrasound images of the breast and the presence of lymph node metastasis. Patients with suspected breast cancer are often examined in the hospital when they are in an advanced stage or even have metastasis that should have been detected earlier. Mammography and breast ultrasound are radiological modalities that are easy to perform to diagnose breast cancer and are available in many hospitals. To date, no studies have directly compared the morphological findings of mammography and breast ultrasound in patients with metastatic breast cancer. Purpose: To identify the differences in the morphological findings of mammography and breast ultrasound in breast cancer patients with metastasis compared to those without metastasis at Dr Cipto Mangunkusumo General Hospital (RSCM). Methods: Mammogram results and breast ultrasound images from 112 patients diagnosed with breast carcinoma based on anatomical pathology were obtained from the Picture Archiving and Communication System (PACS) at the Department of Radiology RSCM. The images were then reviewed. Patient history is obtained from the Electronic Health Record (EHR) or Hospital Information System (HIS). Analyzes were performed on age and morphological characteristics of the lesion, including the shape of the lesion, the largest diameter of the lesion, the distance of the tumor to the skin, the presence of calcification, the type of calcification, the distribution of calcifications, and the presence of architectural distortion on mammograms, and the shape of the lesion, the largest diameter of the lesion, the distance of the tumor to the skin, the vascularity of the lesion, the presence of calcification, and the presence of architectural distortion on breast ultrasound images using Chi-Square or Fisher method. Multivariate logistic regression analysis was also conducted on statistically significant variables using the backward method, which was presented as an odds ratio (OR). Results: There was a statistically significant difference in age ( $p=0,032$ ), the largest diameter of the lesion on the mammogram ( $p<0,001$ ), the distance of the tumor to the skin on the mammogram ( $p<0,001$ ), the largest diameter of the lesion on breast ultrasound ( $p<0,001$ ), and the distance of the tumor to the skin on breast ultrasound images ( $p=0,001$ ) between metastatic and non-metastatic breast cancer patients. In the multivariate analysis of the combination of morphological findings of the mammogram and breast ultrasound images, there were statistically significant differences in the largest diameter of the lesion on mammograms with an OR value of 3.73 ( $p=0,003$ ) and the distance of the tumor to the skin on mammograms with an OR value of 3.34 ( $p=0,006$ ). Conclusion: There is a significant difference in mammogram and breast ultrasound findings, such as the largest diameter of the lesion  $>5$  cm and the distance of the tumor to the skin 0,5 cm with the presence of metastasis in breast cancer. The findings of the largest diameter of the lesion  $>5$  cm and the distance of the tumor to the skin 0,5 cm on the mammogram can predict the probability of metastasis in breast cancer.