ABSTRACT IN ENGLISH

Background: Breast cancer is the most commonly diagnosed cancer and is the leading cause of cancer-related death in women. In 2020, breast cancer in women reached an estimated 2.3 million new cases (11.7%), surpassing other types of cancer in women. This disease is the 5th leading cause of cancer-related death worldwide, with 685,000 deaths (6.9%). Early diagnosis will result in reduced morbidity, mortality, and improved quality of life, which can be achieved with FNAB and the ACR-BIRADS scoring system.

Objective: To find out the relationship between ACR-BIRADS scoring system on ultrasonography (USG) and histopathology results, the relationship between FNAB results and histopathology results, the relationship between the ACR-BIRADS scoring system on USG and FNAB results, and the relationship between the ACR-BIRADS scoring system on USG and FNAB results to histopathology results in breast carcinoma at Dr. Sardjito General Hospital.

Method: Analytical cross-sectional study to determine the relationship between the ACR-BIRADS scoring system on USG and FNAB to histopathology results in breast cancer at Dr. Sardjito General Hospital from January 1, 2020 to December 31, 2022. This study used SPSS Statistics 25.0 with chi-square test analysis and diagnostic tests to obtain sensitivity, specificity, NPV, PPV and accuracy.

Result: The relationship between ACR-BIRADS score and histopathology results has a p value = 0.027 ($p < 0.05$); The relationship between FNAB results and histopathology results has a p value = 0.000 ($p < 0.05$); The sensitivity, specificity, NPV, PPV and accuracy of ACR-BIRADS to histopathology results were 66.1%, 75.00%, 22.2%, 95.4%, and 67.1% respectively; The sensitivity, specificity, NPV, PPV and accuracy of FNAB to histopathology results were 87.9%, 93.75%, 50%, 99.09%, and 88.57% respectively; The sensitivity, specificity, NPV, PPV and accuracy of ACR-BIRADS and FNAB to histopathology results

were 78.94%, 93.75%, 50%, 98.20%, and 81.29% respectively.

Conclusion: There is a significant relationship between ACR-BIRADS score on USG to histopathology and FNAB to histopathology. Relationship between ACR-BIRADS score on USG and FNAB to histopathology has also been noted. The sensitivity of ACR-BIRADS score to histopathology when combined with FNAB will increase compared to using ACR-BIRADS score alone. The specificity and accuracy rate of FNAB are higher than ACR-BIRADS score.

Keywords: ACR-BIRADS, FNAB, histopathology, carcinoma, breast

ABSTRACT IN BAHASA

Latar Belakang: Kanker payudara merupakan kanker yang paling sering didiagnosis dan menjadi penyebab utama kematian akibat kanker pada wanita. Kanker payudara pada wanita di tahun 2020 mencapai perkiraan 2,3 juta kasus baru (11,7%), melampaui jenis kanker lainnya pada wanita. Penyakit ini merupakan penyebab utama kematian akibat kanker ke-5 di seluruh dunia, dengan 685.000 kematian (6,9%). Diagnosis dini akan menghasilkan penurunan morbiditas, mortalitas, dan peningkatan kualitas hidup, di mana ini dapat dicapai dengan FNAB dan sistem skor ACR-BIRADS.

Tujuan: Mengetahui hubungan sistem skor ACR-BIRADS pada ultrasonografi (USG) terhadap hasil histopatologi, hubungan hasil FNAB terhadap hasil histopatologi, hubungan sistem skor ACR-BIRADS pada USG terhadap hasil FNAB, hubungan sistem skor ACR-BIRADS pada USG dan hasil FNAB terhadap hasil histopatologi pada karsinoma payudara di RSUP Dr. Sardjito.

Metode: Penelitian analitik dengan *cross-sectional* untuk mengetahui hubungan antara sistem skor ACR-BIRADS pada USG dan FNAB terhadap hasil histopatologi pada kanker payudara di RSUP Dr. Sardjito dari 1 Januari 2020 hingga 31 Desember 2022. Penelitian ini menggunakan SPSS Statistics 25.0 dengan analisis uji chi-square dan uji diagnostik untuk

memperoleh sensitifitas, spesifisitas, NPV, PPV dan akurasi.

Hasil: Hubungan antara peningkatan skor ACR-BIRADS dengan hasil histopatologi memiliki nilai p = 0,027 (p < 0,05); Hubungan antara hasil FNAB dengan hasil histopatologi memiliki nilai p = 0,000 (p < 0,05); Sensitifitas, spesifisitas, NPV, PPV dan akurasi ACR-BIRADS terhadap hasil histopatologi sebesar 66,1%, 75,00%, 22,2%, 95,4%, dan 67,1%; Sensitifitas, spesifisitas, NPV, PPV dan akurasi FNAB terhadap hasil histopatologi sebesar 87,9%, 93,75%, 50%, 99,09%, dan 88,57%; Sensitifitas, spesifisitas, NPV, PPV dan akurasi ACR-BIRADS dan FNAB terhadap hasil histopatologi sebesar 78,94%, 93,75%, 50%, 98,20%, dan 81,29%.

Kesimpulan: Terdapat hubungan yang signifikan antara skor ACR-BIRADS pada USG terhadap histopatologi dan FNAB terhadap histopatologi. Terdapat hubungan antara skor ACR-BIRADS pada USG dan FNAB terhadap histopatologi. Sensitifitas skor ACR-BIRADS terhadap histopatologi jika dikombinasikan dengan FNAB akan meningkat, daripada jika hanya menggunakan skor ACR-BIRADS saja. Spesifisitas dan tingkat akurasi FNAB lebih tinggi daripada skor ACR-BIRADS.

Kata Kunci: ACR-BIRADS, FNAB, histopatologi, karsinoma, payudara