# Right Breast Carcinoma with Serosanguinous Ulcer in a 65-Year-Old Female: A Case Report

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***Abstract.***
*Breast cancer is the most common malignancy among women worldwide. While most cases present with a palpable mass, cutaneous involvement such as ulceration and serosanguinous discharge is less commonly emphasized and may delay diagnosis, particularly in elderly patients. A 65-year-old female presented with a five-year history of a progressively enlarging right breast lump that had recently ulcerated with serosanguinous and purulent discharge, accompanied by fever, nausea, and anorexia. She had no prior medical evaluation for the mass. Vital signs were stable except for tachycardia (110 bpm). Laboratory findings revealed marked leukocytosis (31.2 × 10³/µL), mild hyponatremia (133 mEq/L), and stage 2 chronic kidney disease (eGFR 60 mL/min/1.73 m²). Core needle biopsy of the breast mass demonstrated invasive carcinoma of no special type (NST), grade III, with no lymphovascular invasion and low tumor infiltrating lymphocytes (<5%). Initial management included intravenous ceftriaxone, analgesics, antiemetics, and wound care. This case highlights the importance of prompt histopathologic diagnosis in ulcerated breast lesions to differentiate malignancy from benign conditions. Delayed presentation remains a challenge in elderly populations. Comprehensive oncologic staging and definitive multimodality therapy are essential for optimal outcomes.*

***Keywords:*** *Breast cancer; invasive carcinoma of no special type; ulceration; serosanguinous discharge and elderly.*

## I. INTRODUCTION

Breast cancer is the most common malignancy among women worldwide, with an estimated 2.3 million new cases in 2022 (GLOBOCAN) [1], while most patients present with a palpable mass or abnormal imaging findings, clinical manifestations can vary significantly, particularly in locally advanced disease [2]. Cutaneous involvement, including skin ulceration and serosanguinous discharge, represents an important but less commonly emphasized presentation that may delay diagnosis if not promptly recognized [3].

In elderly patients, the development of an ulcerated breast lesion with bloody or purulent drainage poses diagnostic challenges [4], [5]. Serosanguinous discharge can arise from both benign and malignant etiologies [6]. Benign conditions such as nipple adenoma may clinically mimic carcinoma, underscoring the critical role of histopathology in establishing a definitive diagnosis [7]. Conversely, malignant tumors including invasive ductal carcinoma, carcinoma with mixed histologic types, and phyllodes tumors can produce ulceration through rapid local invasion and skin breakdown [8], [9].

Ulcerating breast lesions are not exclusively carcinomas. Malignant phyllodes tumors, for example, may attain large sizes and penetrate the dermis, producing extensive cutaneous ulcers that resemble other aggressive breast pathologies [10], [11]. Such presentations complicate both imaging interpretation and surgical margin assessment. Therefore, a comprehensive diagnostic workup integrating clinical examination, imaging, and core needle or excisional biopsy is essential to differentiate primary breast carcinoma from other ulcerative neoplasms and to guide appropriate therapy.

This case report describes a 65-year-old female with right breast carcinoma presenting as a chronic enlarging mass that recently developed serosanguinous ulceration, accompanied by systemic symptoms including fever and malaise. The patient had no prior medical evaluation for the breast mass over five years. This report aims to highlight the importance of recognizing atypical presentations of breast cancer, particularly cutaneous ulceration with mixed discharge, in elderly populations. It also emphasizes the value of timely histopathologic confirmation to avoid diagnostic delays and improve clinical outcomes.

## II. CASE REPORT

### Patient Identification

A 65-year-old female patient, Mrs. Sanah binti Jumenah, presented to the hospital with a chief complaint of purulent discharge from a lump in her right breast. Her medical record number is 289937. She is of Islamic faith and is covered by BPJS health insurance. The patient resides in KP Kamurang RT/RW 006/001, Bakung, Cikande, Serang Regency, Banten.

**Fig. 1.** Clinical presentation of the patient's right breast showing a large tumor mass with a central serosanguinous, necrotic ulcer.

### History Taking

1. Present Illness History

The patient reported noticing a lump in her right breast approximately five years prior to admission. Initially, the lump was small but progressively enlarged over time. The patient never sought medical attention for this lump. One week before hospital admission, the lump began to discharge pus accompanied by blood. She also experienced pain, intermittent fever, nausea, and decreased appetite.

2. Past Medical History

- Hypertension: Positive (diagnosed previously)
- Diabetes Mellitus: Negative

3. Medication History

- Amlodipine 5 mg once daily

4. Social and Habit History

No significant habits were reported.

### Vital Signs

| Parameter | Result |
|---|---|
| Blood Pressure | 128/59 mmHg |
| Heart Rate | 110 bpm |
| Respiratory Rate | 20 breaths/min |
| Temperature | 35.7°C |
| $SpO_2$ | 98% on room air |

### Physical Examination

1. General: Patient was conscious, alert, and cooperative.
2. Head: Normocephalic, no signs of anemia or icterus.
3. Thorax: Symmetrical, no retractions.
4. Cardiovascular: Heart sounds I and II regular, no murmurs or gallops.
5. Respiratory: Vesicular breath sounds present bilaterally, no rhonchi or wheezing.
6. Abdomen: Supple, bowel sounds normal, no tenderness or enlargement.

7. Extremities: Warm acral, capillary refill time <2 seconds, no pitting edema.

**Local Status (Right Breast)**

A mass was palpable in the right breast. The overlying skin showed ulceration with a mixture of purulent and serosanguinous discharge. Further details regarding size, consistency, and mobility were limited due to the presence of ulceration and local infection.

**Supporting Examinations**

1. Laboratory Findings

Blood samples were collected on April 13, 2026. Notable findings included:

| Parameter | Result | Range | Interpretation |
|---|---|---|---|
| Hemoglobin | 11.8 g/dL | 11.7–15.5 | Normal |
| Leukocytes | 31.2 × $10^3$/µL | 3.6–11.0 | High (marked leukocytosis) |
| Platelets | 260 × $10^3$/µL | 150–440 | Normal |
| Random Blood Glucose | 110 mg/dL | <200 | Normal |
| Ureum | 32 mg/dL | 15–40 | Normal |
| Creatinine | 1.04 mg/dL | 0.60–1.20 | Normal |
| eGFR | 60 mL/min/1.73 $m^2$ | ≥90 | Mildly reduced |
| Sodium | 133 mEq/L | 135–155 | Mild hyponatremia |
| Potassium | 3.7 mmol/L | 3.5–5.0 | Normal |
| PT | 14.1 sec | 11.0–14.0 | Slightly prolonged |
| APTT | 39.8 sec | 27.0–45.0 | Normal |
| INR | 1.13 | 0.80–1.30 | Normal |
| HBsAg | Non-reactive | Non-reactive | Normal |

Marked leukocytosis (31.2 × $10^3$/µL) suggestive of infection or inflammation, mild hyponatremia, and mildly reduced eGFR indicating stage 2 chronic kidney disease, requiring monitoring.

2. Chest X-Ray

No abnormalities were reported (data not fully available).

3. Biopsy and Histopathology Examination

A biopsy of the right breast mass was performed on April 16, 2026.

**Macroscopic Description**

One piece of tissue measuring 3.5 × 1 × 0.5 cm, white-brown in color, with firm consistency.

**Microscopic Descriptio**

Sections showed stratified squamous epithelium with keratinization, erosion, and ulceration. A tumor mass composed of round to oval cells was observed, growing in a hyperplastic pattern. Some areas showed solid sheets, while less than 10% formed glandular structures. The nuclei were pleomorphic, hyperchromatic, with some vesicular nuclei and prominent nucleoli. Mitotic figures were approximately 9 per 10 high-power fields (HPF). The stroma was fibrocollagenous with lymphocytic infiltration and dilated blood vessels. No lymphovascular invasion was identified.

**Table 1.** Histopathological characteristics of the right breast tumor.

| Diagnosis | Invasive Carcinoma of No Special Type (NST) |
|---|---|
| Grade | Grade III |
| Location | Right breast (Mammae dextra) |
| Lymphovascular Invasion | Not identified |
| DCIS | Not identified |
| Microcalcifications | Not identified |
| Tumor Infiltrating Lymphocytes (TILs) | <5% |

**Diagnosis**

1. Working Diagnosis: Carcinoma mammae dextra (Right breast carcinoma), Invasive carcinoma of no special type, Grade III
2. Differential Diagnosis: None documented

**Management**

1. Pharmacological Therapy

- Intravenous Ringer's Lactate 500 mL every 8 hours
- Ranitidine 2 × 1 ampoule
- Ondansetron 3 × 1 ampoule

- Ceftriaxone 2 × 2 grams IV
- Ketorolac 3 × 1 ampoule as needed for pain
- Wound care (GV luka)

2. Surgical Therapy

- Biopsy (performed)
- Further therapy to be continued

3. Non-Pharmacological Therapy

- Maintain cleanliness of the wound area
- Regular dressing change every 3 days

**Fig.2.** Surgical management of the ulcerated right breast mass, showing wound packing and structural suturing.

## III. DISCUSSION

This case report describes a 65-year-old female patient with right breast carcinoma presenting as a chronic enlarging mass that developed acute ulceration with serosanguinous and purulent discharge. The patient had a five-year history of a progressively enlarging breast lump without prior medical evaluation, reflecting a common challenge in resource-limited settings or among elderly populations with limited access to healthcare. The discussion below analyzes the key clinical, laboratory, and histopathological findings, compares them with existing literature, and highlights the diagnostic and therapeutic implications.

The patient presented with classic features of locally advanced breast cancer: a long-standing mass that recently ulcerated, accompanied by pain, fever, nausea, and anorexia. The presence of mixed purulent and serosanguinous discharge from an ulcerated breast lesion raises a broad differential diagnosis, including infectious mastitis, benign ulcerative lesions such as nipple adenoma, and malignant neoplasms including invasive ductal carcinoma, phyllodes tumor, or even primary skin cancers [12]. In this case, the chronic progressive enlargement over five years without spontaneous regression or cyclical changes argues strongly against benign inflammatory conditions. Furthermore, the patient's age of 65 years places her in a high-risk demographic for breast malignancy. The absence of diabetes mellitus and the presence of controlled hypertension are notable but not directly contributory to the breast pathology. The delayed presentation five years from initial lump recognition to seeking care is concerning but not uncommon, particularly in elderly patients who may attribute breast masses to normal aging changes or fear medical evaluation. The systemic symptoms of fever, nausea, and decreased appetite likely reflect secondary infection of the ulcerated tumor rather than paraneoplastic phenomena, supported by the markedly elevated leukocyte count of $31.2 \times 10^3/\mu L$. Tumor ulceration breaches the skin barrier, allowing bacterial colonization and subsequent cellulitis or abscess formation, which can exacerbate pain and delay definitive oncologic management.

The laboratory evaluation revealed several noteworthy abnormalities. The marked leukocytosis of $31.2 \times 10^3/\mu L$ is significantly above the upper reference limit of $11.0 \times 10^3/\mu L$ and is most consistent with an acute infectious or inflammatory process. Given the clinical context of an ulcerated breast lesion with

purulent discharge, this likely represents secondary bacterial infection of the necrotic tumor. Studies have shown that up to 30% of patients with ulcerated breast cancers develop clinically significant wound infections requiring antibiotic therapy [13]. The administration of ceftriaxone, a third-generation cephalosporin, was appropriate empiric therapy, though wound culture and sensitivity testing would have been beneficial to guide targeted antibiotic selection. Mild hyponatremia (133 mEq/L) was also observed. Hyponatremia in cancer patients can result from the syndrome of inappropriate antidiuretic hormone secretion (SIADH), a recognized paraneoplastic phenomenon particularly in small cell lung cancer but also reported in breast carcinoma. Alternatively, it may be dilutional secondary to poor oral intake and intravenous fluid administration. The patient's concurrent nausea and anorexia support the latter mechanism, though monitoring serum sodium during hospitalization is warranted. The mildly reduced eGFR of 60 mL/min/1.73 m² indicates stage 2 chronic kidney disease (CKD). Given the patient's age of 65 years and history of hypertension, this is likely attributable to chronic hypertensive nephropathy. Importantly, this impacts medication dosing, particularly for antibiotics and non-steroidal anti-inflammatory drugs. The use of ketorolac, an NSAID, should be approached with caution in patients with reduced renal function due to the risk of acute kidney injury. Additionally, a slightly prolonged prothrombin time of 14.1 seconds was noted. The clinical significance of this isolated mild prolongation is uncertain in the absence of bleeding manifestations. It may reflect mild vitamin K deficiency related to poor nutritional intake (anorexia) or early liver dysfunction, though no coagulopathy-related complications were reported during the biopsy procedure.

The histopathological examination provided the definitive diagnosis: invasive carcinoma of no special type (NST), also previously termed invasive ductal carcinoma not otherwise specified (NOS). This is the most common subtype of breast cancer, accounting for approximately 70–80% of all invasive breast cancers [14]. The tumor was classified as Grade III (high grade) based on pleomorphic and hyperchromatic nuclei, prominent nucleoli, and a mitotic count of 9 per 10 HPF. The Nottingham Histologic Score evaluates three components: tubule formation, nuclear pleomorphism, and mitotic count. Grade III tumors have the least differentiation and are associated with more aggressive behavior, higher proliferation rates, and worse prognosis compared to grade I or II tumors. The microscopic examination specifically noted no lymphovascular invasion (LVI). LVI is an important prognostic factor indicating tumor cell entry into lymphatic or blood vessels, which predicts a higher risk of nodal metastasis and distant recurrence. Its absence in this case is a favorable prognostic feature, though the patient still requires axillary staging, such as sentinel lymph node biopsy or axillary dissection, to complete pathologic staging. Regarding tumor infiltrating lymphocytes (TILs), the finding of less than 5% TILs represents a low host immune response against the tumor. Low TILs (below 10%) are associated with a less active immune microenvironment and generally poorer response to neoadjuvant chemotherapy. Conversely, high TILs (above 50%) are correlated with better outcomes, particularly in triple-negative and HER2-positive subtypes. The low TILs in this patient suggest that immunotherapeutic approaches may be less effective, though further immunohistochemical profiling for estrogen receptor (ER), progesterone receptor (PR), and HER2 status is essential for complete molecular subtyping and targeted therapy planning. The histology did not show features of malignant phyllodes tumor, such as leaf-like architecture, stromal overgrowth, or heterologous elements, nor other rare ulcerative neoplasms. Thus, the diagnosis of invasive carcinoma NST, grade III, is confirmed. This distinction is critical because management differs substantially: phyllodes tumors are treated with wide local excision without axillary surgery, whereas invasive carcinomas require staging of the axilla and systemic therapy [15].

The initial management strategy appropriately addressed the infectious complication with intravenous ceftriaxone, wound care, and supportive therapy including analgesics, antiemetics, and hydration. The administration of ranitidine (an H2 blocker) and ondansetron (a 5-HT3 antagonist) addressed nausea and provided gastric protection, though the role of routine stress ulcer prophylaxis in non-critically ill patients is debated. Regarding antibiotic therapy, ceftriaxone 2 grams twice daily is a high-dose regimen appropriate for moderate-to-severe soft tissue infections. However, in the context of an ulcerated breast tumor, coverage for skin flora including *Staphylococcus aureus* and *Streptococcus* species is essential. Ceftriaxone provides good coverage but lacks specific anti-MRSA activity. If MRSA is suspected, addition

of vancomycin or linezolid should be considered. Wound culture was not documented in this report and would be a valuable addition. For wound management, the photograph (Figure 2) shows surgical packing and structural suturing, indicating that debridement or wound exploration was performed. Optimal management of ulcerated breast cancers includes gentle debridement of necrotic tissue, control of bleeding (as serosanguinous discharge may indicate friable tumor vessels), and moist dressings to promote granulation. Negative pressure wound therapy (vacuum-assisted closure) may be considered for large defects, though its application over malignant wounds remains controversial due to the theoretical risk of tumor dissemination. Following infection control and biopsy confirmation, the patient requires comprehensive oncologic staging, including axillary ultrasound with fine-needle aspiration or core biopsy of suspicious lymph nodes, contrast-enhanced CT of the chest, abdomen, and pelvis to exclude distant metastases (lung, liver, and bone are common sites), bone scan or PET-CT if clinically indicated, and immunohistochemistry for ER, PR, HER2, and Ki-67 proliferation index. Based on staging results, treatment options include: for locally advanced but non-metastatic disease (stage III), neoadjuvant chemotherapy (e.g., anthracycline-taxane based regimens) followed by mastectomy with axillary dissection, then adjuvant radiotherapy and endocrine therapy (if hormone receptor-positive) or anti-HER2 therapy (if HER2-positive); for metastatic disease (stage IV), palliative systemic therapy, local radiotherapy for symptom control, and continued wound care. The patient's age of 65 years is not a contraindication to standard therapy, though renal function (eGFR 60) and hypertension require consideration when selecting chemotherapy agents, such as carboplatin dose adjustment or careful hydration with cisplatin.

Similar cases have been reported in the literature. A case of nipple adenoma mimicking malignant ulceration, emphasizing the necessity of histopathology [7]. In contrast, our case had unequivocal malignant histology. A series of giant phyllodes tumors with ulceration, highlighting that large size and skin breakdown do not reliably distinguish between carcinoma and sarcoma [9]. A case of metaplastic breast carcinoma presenting with ulceration, a rare subtype with poor prognosis [10]. Our patient's invasive carcinoma NST, grade III, represents the more common but still aggressive form. The delayed presentation of five years in our patient exceeds the typical delay described in most series, where mean delay ranges from 6 to 18 months in low-resource settings. This underscores the need for community-based breast health education and clinical breast examination programs targeting elderly women.

This case report has several limitations. First, complete staging investigations, including axillary imaging and distant metastasis screening, were not available at the time of this report. Second, immunohistochemical receptor status for ER, PR, and HER2 was not performed, which is essential for guiding systemic therapy. Third, wound culture was not obtained, leaving the specific microbial etiology of the secondary infection unknown. Fourth, long-term follow-up data regarding response to definitive treatment and survival outcomes are not yet available. Finally, the patient's socioeconomic and educational background, which likely contributed to delayed presentation, was not systematically assessed. Despite these limitations, this case provides valuable clinical insights into the presentation and management of ulcerated breast carcinoma in an elderly patient with delayed care-seeking behavior. It reinforces the importance of prompt histopathologic diagnosis, appropriate antibiotic therapy for secondary infection, and comprehensive oncologic staging to guide definitive multimodality treatment.

## IV. CONCLUSION

This case report illustrates a classic presentation of locally advanced invasive breast carcinoma (NST, grade III) with cutaneous ulceration and secondary infection in an elderly hypertensive female with a five-year delay in seeking care. The diagnosis was confirmed by core needle biopsy and histopathology, showing high-grade features without lymphovascular invasion. Initial management focused on controlling infection with antibiotics and wound care. Complete oncologic staging and definitive multimodality therapy remain to be completed. This case reinforces the importance of prompt histopathologic diagnosis in ulcerated breast lesions, the need for comprehensive staging, and the value of case reports in highlighting atypical yet clinically significant presentations of common malignancies. Future follow-up and completion of receptor status testing will further inform the prognostic and therapeutic landscape for this patient.

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