

An Exceptional Case of Late Nasopharyngeal Carcinoma Metastasis to Breast Posing Diagnostic Challenge – A Rare Case Report

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Introduction

- Nasopharyngeal carcinoma (NPC) is prevalent in SE Asia & Africa and strongly associated with EBV.
- NPC commonly metastasizes to cervical/supraclavicular LNs, with lung, liver & bone also frequently involved.
- Breast metastasis is exceedingly rare (~14 cases reported since 1991).
- FDG PET/CT + histopathology/IHC are essential for diagnosis; EBER positivity strongly supports NPC origin.

Case Presentation

- 41-year-old woman with metastatic NPC diagnosed in Apr 2024, treated with chemoradiotherapy.
- Serial follow-up imaging showed no recurrent disease until 2026, when a right breast mass developed.
- FDG PET/CT, mammography and ultrasound confirmed secondary breast lesion.
- Initial biopsy/IHC favored invasive breast carcinoma, however, MDT review prompted repeat IHC, showing P40 & EBER positivity, confirming metastatic NPC to the breast.
- Planned treatment: 6 cycles Carboplatin/Paclitaxel.

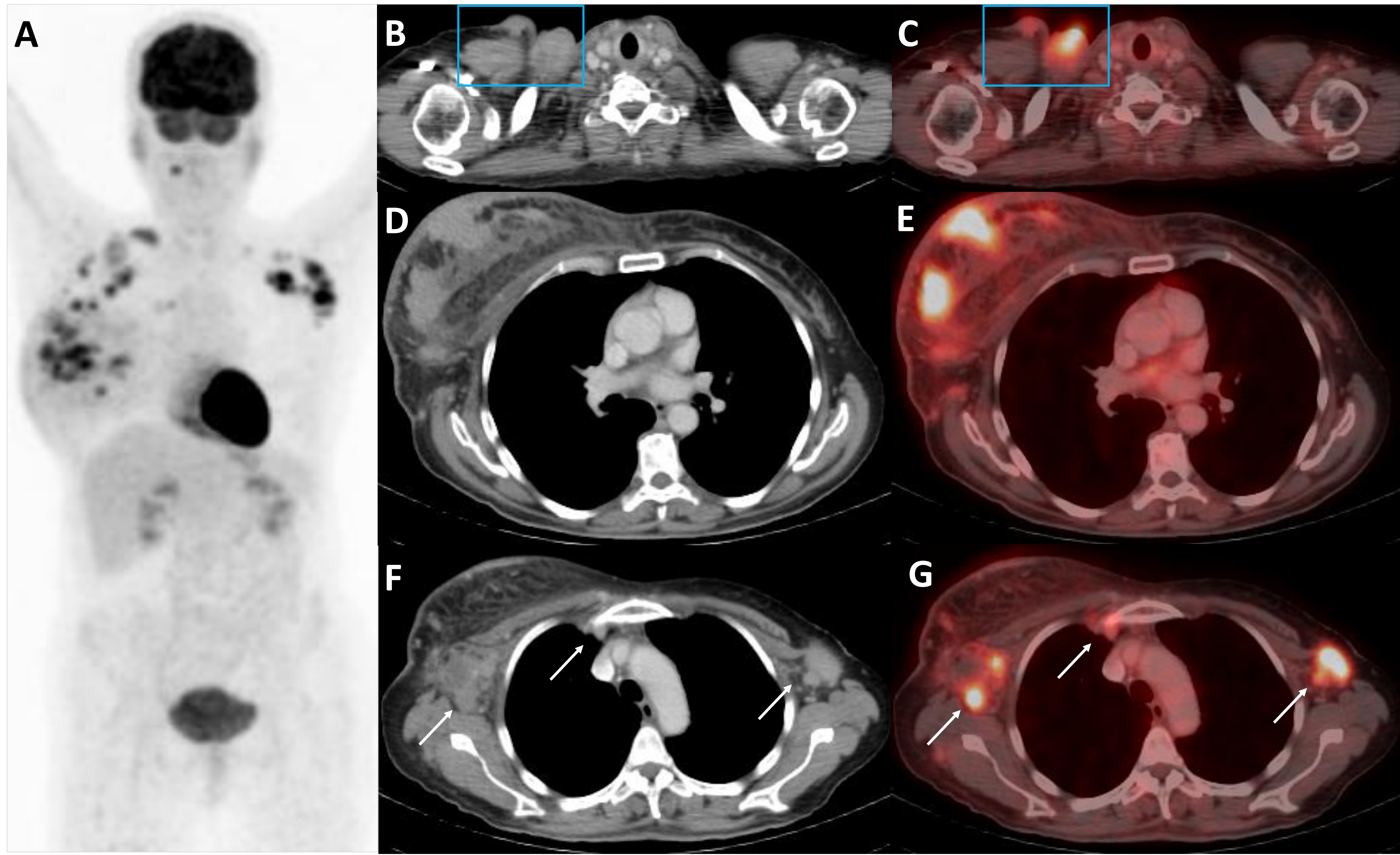


FIGURE 1: Maximum intensity projection (MIP) images (A) do not show any increased uptake in the nasopharyngeal region, however, multiple foci of increased metabolic activity are seen in the neck and thorax. Axial CT and fused images (B,C) show FDG avid subcutaneous nodules, SUVmax 6.1 (boxes). Hyper metabolic right breast multiple scattered lesions with associated cutaneous thickening and edematous changes were also noted, SUVmax 5.7 (D,E). FDG avid bilateral axillary/ retropectoral (SUVmax 6.6) and right internal mammary lymphadenopathy (SUVmax 2.9) were consistent with metastatic disease (F,G arrows).

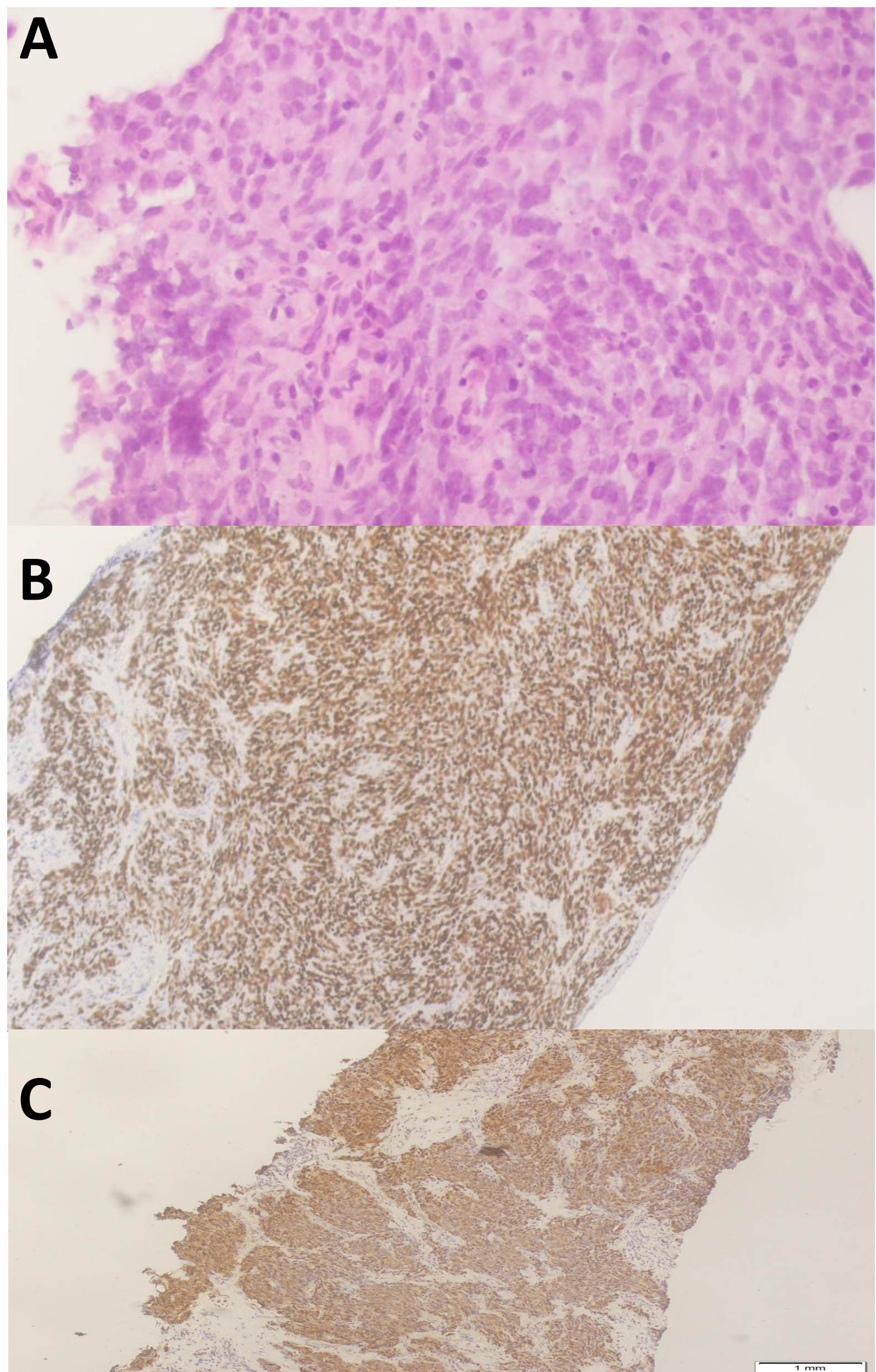


FIGURE 2: A. 40x High power shows tumor cells exhibiting marked nuclear pleomorphism. B. P40 Positive C. Eber Positive

Discussion

 Key Diagnostic Clues - Late metastasis (2 years). - Breast involvement from NPC is rare. - Can mimic primary breast carcinoma.	 Imaging - Ill-defined, high-density breast mass with retroareolar extension, skin edema. - PET-CT shows widespread nodal and cutaneous uptake.	 Pathology - P40 positive. - EBER positive. - Confirms metastatic NPC.	 Management Multidisciplinary approach with systemic therapy remains the mainstay.
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Conclusion

Metastatic NPC can mimic primary breast carcinoma, even without local recurrence. A prior NPC history should prompt consideration of metastasis, with PET/CT, histopathology and IHC, particularly EBER, guiding accurate diagnosis and appropriate management, potentially avoiding unnecessary breast-directed surgery.