Tubular carcinoma of the breast

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Introduction

Tubular carcinoma of the breast, first described by Cornil and Ranvier in 1869 [5], is a rare variant of invasive breast cancer, characterized by well-differentiated, orderly tubule formation and associated with excellent patient outcomes. The outstanding prognosis of this disease has led some to investigate if it could be safely managed less aggressively than standard invasive ductal carcinoma (IDC). In recent years, the necessity of lymph node evaluation [7, 16, 36], systemic therapy [7], and radiation therapy for these patients have all been questioned [18, 30]. Yet, while some have advocated a more restrained approach to the management of this cancer, others have expressed reluctance at deviating from a standard of care that has produced such exceptional outcomes [29].

Numerous cases of tubular carcinoma have been reported in the literature, however, deriving definitive treatment recommendations from this data is often not possible. Most cases have been reported in small retrospective series, and the histologic criteria for the diagnosis of this disease have varied widely among publications. As a result, cases can rarely be combined into more meaningful meta-analyses, and many of the important questions regarding the management of tubular carcinoma remain unresolved.

Although tubular carcinoma of the breast is a rare disease, making up less than 2% of all invasive breast cancers in the largest reports [7, 21, 26], recent findings indicate that its incidence may be rising by about 6% per year relative to other breast cancers [26]. As this disease becomes more common, and as the treatment of breast cancer continues to evolve, questions regarding the proper management of tubular carcinoma will likely persist. To address some of these uncertainties and to better inform the evidence-based management of this malignancy, this chapter presents an overview of the past research, recent developments and ongoing controversies in the treatment of tubular carcinoma of the breast.

Five Essential Points

1. Tubular carcinoma is a rare breast malignancy associated with an excellent prognosis.
2. The histologic makeup of each tumor is an important prognostic factor, yet these criteria vary widely among published studies.
3. New histologic criteria may better predict patient outcomes.
4. The necessity of lymph node evaluation, adjuvant radiation therapy and systemic therapy for this disease have been questioned, but a less aggressive standard of care does not currently seem supported by the literature.
5. More evidence is needed to guide the future management of this disease.
Prognosis and histologic considerations

The excellent prognosis of tubular carcinoma has been demonstrated repeatedly in the literature. When compared to IDC, tubular carcinoma has often been linked to a higher rate of overall survival [4, 7], a lower rate of local recurrence [15], a lower incidence of lymph node involvement [15, 34], and a smaller primary tumor size.

**Fig. 1.** 100% tubular carcinoma, × 50.

**Fig. 2.** 100% tubular carcinoma, × 100.