Carcinoma In Situ

A. Epidemiology and Etiology

No cancer from any site provokes more diverging intellectual and emotional responses or calms and unsettles people like ductal carcinoma in situ (DCIS). Its various names—ductal carcinoma in situ, non-invasive ductal carcinoma, preinvasive ductal carcinoma—provide a glimpse into its controversy. Four factors contribute to its controversial nature. First and foremost is its relatively unknown biologic behavior. Second is the increasing incidence of the disease despite the fact that not all consider this entity to be cancer. Third, the true natural history of the disease is uncertain. Finally, the best management for the disease, given its excellent prognosis regardless of treatment regimen, is not clear. We may find that the disease is truly heterogeneous not because of its own intrinsic properties but because of the human host in whom it presents. We may also find that we are better served treating the patient and not the disease.

The concept of in situ cancer was first proposed by Broders, who attempted to define a transition between benign and malignant epithelium. Abnormal cells confined to their original boundaries is a property associated with in situ cancers at all organ sites. In 1941 Foote and Stewart applied the term “in situ” to lobular carcinoma in situ; they considered it in an intermediate state between normal epithelium and invasive malignant disease. Progression to cancer was considered unavoidable, and aggressive treatment seemed an obvious course of action for the surgeon.

Over the years, as the incidence of DCIS has increased, we have been forced to reevaluate our earlier concepts of the biology, malignant potential, and treatment of the disease. This increased incidence clearly parallels the increased utilization of screening mammography, which frequently detects the disease in asymptomatic individuals. Swansen et al. reported that the incidence of DCIS increased 213% in Caucasians and 153% in African-Americans between 1983 and 1989. DCIS accounts for 30–40% of mammographically detected breast cancers. Ernster et al. analyzed data on DCIS reported to the National Cancer Institute’s Surveillance, Epidemiology, and End Results (SEER) program between 1973 and 1992. They noted an increase in DCIS incidence beginning during the early 1980s. The average annual increases in rates between 1973 and 1983 and between 1983 and 1992 changed...
Ductal Carcinoma In Situ

Noninvasive ductal carcinoma
Preinvasive ductal carcinoma

A. Epidemiology and Etiology
Mammographically increased incidence of DCIS
Heterogeneous disease
Most patients do well

B. Presentation

Palpable lesion

Mammographic lesion

Core needle biopsy

Excisional biopsy needed for all

Assess size, histology, margins

C. Histologic Risk Assessment
Van Nuys data (see Table 22–1)

Van Nuys 5,6,7

D. Lumpectomy, Irradiation
Irradiation lowers recurrence 13%
Appropriate when margins are free, there are no residual suspicious calcifications, tumor/breast size is favorable, DCIS is not multifocal

Van Nuys 3,4

Total mastectomy: consider when there is extensive or multicentric disease, persistent microcalcifications, positive margins

Excision only

Ipsilateral breast cancer in 16.4%
50% Invasive
Appropriate for incidentally found small tumor

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