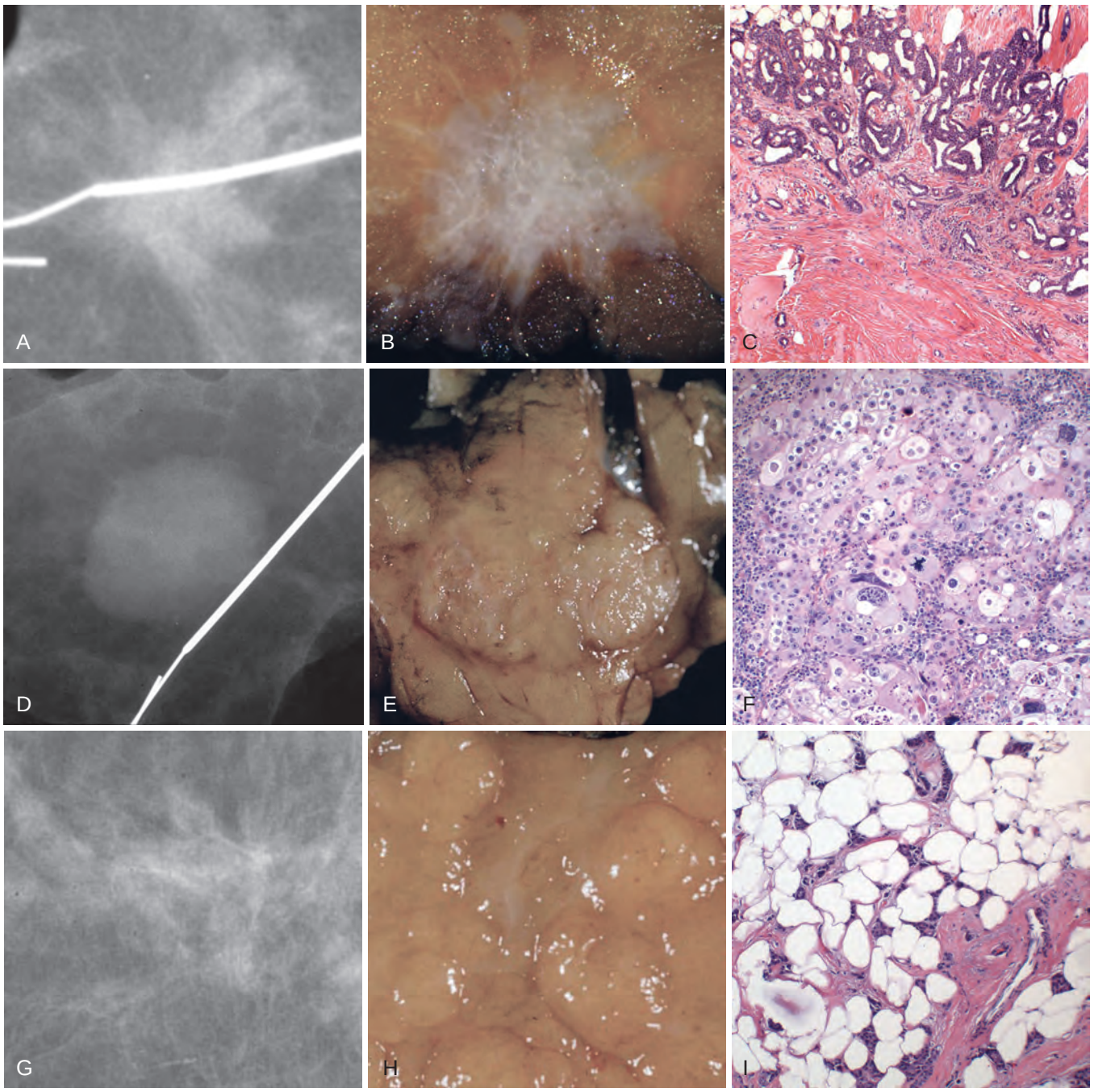

Figure 23-22 Invasive carcinoma of no special type. The majority of invasive carcinomas have a haphazard pattern of stromal invasion that produce masses with irregular margins on imaging (**A**) and gross examination (**B**). Microscopically, such tumors are marked by an exuberant desmoplastic stromal response (**C**). A subset of carcinomas grows as masses that appear to be well circumscribed or lobulated by imaging (**D**) and by gross inspection (**E**). Microscopically, such cancers typically take on the appearance of expansile masses of cells with pushing borders; stromal response is often limited to a narrow zone of fibrosis at the tumor margin (**F**). Rarely, invasive cancers produce little or no stromal response. Such cancers may only show subtle architectural distortion on mammography (**G**) and may not produce palpable masses or be identifiable grossly (**H**). Microscopically, tumor cells are found scattered within normal appearing fibroadipose tissue (**I**). (**B,** Courtesy of Dr. David Hicks, University of Rochester Medical Center, Rochester, NY.)

least 2 to 3 cm in size. The mammographic and gross appearance of invasive carcinoma varies widely depending on the stromal reaction to the tumor (Fig. 23-22). They most commonly present as a hard, irregular radiodense mass (Fig. 23-22*A, B*) associated with a desmoplastic stromal reaction (Fig. 23-22*C*). When cut or scraped, such tumors typically produce a characteristic grating sound (similar to cutting a water chestnut) due to small, central pinpoint foci or streaks of chalky-white desmoplastic stroma and occasional foci of calcification. Less commonly, tumors present as deceptively well-circumscribed (Fig. 23-22*D, E*) masses composed of sheets of tumor cells with scant stromal reaction (Fig. 23-22*F*), or may be almost