Breast-conserving surgeries (BCSs) are excisions of breast tissue that are not full mastectomies. Early-stage invasive breast cancer and ductal carcinoma in situ (DCIS) (i.e., cancer of the ductal elements of the breast that has not invaded beyond the ducts) (Dudley & Zucker, 2013) can be successfully treated with breast-conserving therapy and postoperative radiation (Hunt, Robb, Strom, & Ueno, 2008). However, some patients who undergo breast-conserving treatment may need to have a second excision or mastectomy to obtain clear margins or address complications.

Clear margin refers to a margin of healthy cells surrounding the area of the tumor (Benedet & Rounsaville, 2004). Data from diverse studies across the globe indicate that 7%–30% of patients undergo re-excision, with an average of about 20%. The re-excision rate is even higher for DCIS cases, with rates closer to 30%–60% of patients (Devouge et al., 2013; Jeevan et al., 2012; McCahill et al., 2012; Meier-Meitinger et al., 2012;