Abstract: B3 lesions comprise different histopathological entities that are considered benign but 'of unknown biological potential'. These entities may act as risk indicators (for both breasts) or as non-obligatory precursors of malignancy. Being diagnosed at percutaneous breast biopsy, an additional risk of underestimation exists. Imaging appearances, histopathological appearance and risk of associated malignancy are presented. B3 lesions of high risk, which thus should usually be excised, include atypical ductal hyperplasia (ADH), pleomorphic or necrotic type of lobular neoplasia (LIN 3), and papillary lesions with atypias. Intermediate risk may be associated with classic lobular carcinoma in situ (LIN 2) or flat epithelial atypia (FEA), and low risk with radial sclerosing lesions (RSLs) and papillary lesions without atypias. LIN 1 is mostly an incidental finding acting as risk indicator. Follow-up is adequate if the initial diagnostic problem is solved. According to international guidelines, risk and subsequent recommendations should be discussed for each individual patient, taking into account biological risk, representative sampling, lesion size, lesion extent, percentage of lesion removal, other individual risks, and the possibility of surveillance. With vacuum-assisted breast biopsy (VABB), surgery may be avoided for more of the small lesions at low risk. Further data collection and diligent evaluation may help to better assess the individual risk, to better adapt treatment recommendations and avoid overtreatment.