We evaluate the performances of sonoelastography in the characterization of breast nodules with histologic correlation. Elastosonography was performed immediately after mode B sonography in 59 patients (65 nodules) by two radiologists, independently. All sequences of elastosonography were recorded. An intra and inter-observers correlation was calculated. Each nodule was classified with BI-RADS lexicon and with Ueno elastography classification. The scores 1–3 were considered as benign and 4–5 as malignant. A cytologic/histologic diagnosis was available for all nodules. At histology, 16 nodules were malignant and 49 nodules were benign. The intra and inter-observer correlations of elastosonography were excellent. The sensitivity, specificity, PPV, NPV of sonoelastography were 87.5%, 98%, 93.3%, 96%, respectively comparing with 100%, 93.9%, 84%, 100% of Mode B sonography. Thus, 95% (36/38 nodules) of BI-RADS 3 nodules were reclassified score 2 or 1 with elastosonography, decreasing the rates of fine needle aspiration and short-term follow-up. Elastosonography is a simple, rapid and complementary method to mode B sonography that can improve the specificity in the characterization of breast nodules and the management of BI-RADS 3 nodules, leading to a decrease of false-positive and short term follow-up rates.