Hormone-responsive breast tumor-associated (BTA) androgenic activity is related to the estrogen-responsive (ER) functions of breast cancer cells. This study was aimed at understanding the role of androgenic activity in breast cancer. We have previously shown that BTA cells contain high levels of androgen-responsive elements (AREs) that are associated with the expression of androgen-responsive genes. The BTA cells were treated with androgens and the expression of androgen-responsive genes was measured by quantitative real-time PCR. The results showed that androgen treatment increased the expression of several androgen-responsive genes, including those involved in cell proliferation and survival. These findings suggest that androgenic activity may play a role in the development and progression of breast cancer.