Estrogen receptor-α gene codon 10 (T392C) polymorphism in Iranian women with breast cancer: a case study

ABSTRACT

A case study was conducted to establish a database of polymorphisms in Iranian population in order to compare Western and Iranian (Middle East) distributions and to evaluate ESR1 polymorphism as an indicator of clinical outcome. The ESR1 gene was scanned in Iranian patients newly diagnosed invasive breast tumors, (150 patients) and in healthy individuals (147 healthy control individuals). PCR single-strand conformation polymorphism methodology and direct sequencing were performed. The silent single nucleotide polymorphism (SNPs) was performed, as reported previously in other studies, but at significantly different frequencies, with further increasing predictive accuracy in Iranian population. Data suggest that ESR1 polymorphisms are correlated with various aspects of breast cancer in Iranian ESR1 genotype, as determined during pre-surgical evaluation, might represent a surrogate marker for predicting breast cancer.