

# Acinic Cell Carcinoma of the Breast (ACC): Morphological and Molecular Features of Rare Breast Cancer

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## Abstract

Acinic Cell Carcinoma of the breast (ACC) is a very rare subtype of breast cancer, being of bland cellular morphology, but having a triple-negative phenotype. Usually, it was thought to be indolent, but a few cases have been reported highly aggressive. The molecular studies showed similar features in diagnosing to the Triple-Negative Breast Cancer (TNBC), which usually had the aggressive clinical course. This mini review comprehensively summarizes the recent literature on the molecular features of this rare breast cancer. We try to explain why some ACC have not the indolent course as we thought previously.

**Keywords:** Acinic Cell Carcinoma (ACC); Molecular features; Cytoplasm; Triple-Negative Breast Cancer (TNBC)

## Introduction

Acinic Cell Carcinoma of the breast (ACC) is an exceedingly rare histological type of breast cancer, first described by Roncaroli [1]. To date, no more than 100 cases have been published in the literature [1,2]. Morphologically, ACC of the breast shares similarities with its salivary gland counterparts and have triple-negative phenotype [3]. In early case series, pure ACCs of the breast are thought to be low-grade carcinomas [4]. However, there have been cases reported with poor prognosis recently [5]. With the development of the molecular techniques, more and more studies show the similar feature between ACC and the TNBC [6,7] which may be the foundation of the ACC development and progressive. Here, we review its morphological and molecular pathological changes, with a particular focus on molecular changes, in or how p theoEpoñ

breast ACC always lacks NR4A3 rearrangement or overexpression

7. Piscuoglio S, Hodi Z, Katabi N, Guerini-Rocco E, Macedo GS, et al.