

# CASE 072

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## CASE HISTORY:

Today we present a case of Metastatic Breast Carcinoma of a 70-year-old female patient referred for PIK3CA molecular testing. Family history constituted of her younger sister who was previously diagnosed with Carcinoma Breast at the age of 52 years. Whole body PET Scan revealed metabolically active mass lesion in left breast measuring 2.7x2.3 cm and focal hypodense lesion with peripheral enhancement in Right lobe of liver. Post C7 Palbociclib+AI: Response was observed in all other lesions, increase in size of liver lesion. We propose by screening for PIK3CA mutations a new horizon will be unlocked to assist the clinicians for choosing most preferred drug for better clinical outcome especially in metastatic setting.

## TITLE:

Importance of PIK3CA Mutation as a Molecular Target for Hormone Receptor Positive, Her2 Negative Metastatic Breast Carcinoma Case

## INTRODUCTION:

Metastatic Breast Carcinomas (MBC) have been extensively studied to discover novel molecular targets for better outcome, however in spite of many breakthrough achievements metastatic setting still remains incurable and a concern to clinicians for targeted therapeutic interventions.(1)

PIK3CA is the oncogene with highest frequency of gain-of-function mutations in breast cancer, but the prognostic value of PIK3CA mutation status is controversial. The alteration in (PIK)/Akt/mammalian target of rapamycin (mTOR) pathway leads to oncogenesis by regulating cellular growth, proliferation, survival and angiogenesis. PIK3CA mutations occur in approximately 40% of patients with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer. The PI3K $\alpha$ -specific inhibitor Alpelisib has shown antitumor activity especially in cases where endocrine therapy shows therapeutic resistance.(2) For optimal drug