# Migraine natural history in Women with Breast Cancer undergoing Hormonal Therapy

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## INTRODUCTION

**Migraine** is a disabling condition affecting 12-20% of the global population, with higher prevalence in women. It is a leading cause of disability, especially in women aged 15-49. Hormonal fluctuations significantly influence migraine during puberty, pregnancy, menopause, and exogenous hormone use.

**Breast cancer**, the most common malignancy in women, affects 1 in 8 women and often requires prolonged endocrine therapy (Tamoxifen, GnRH, aromatase inhibitors), which can cause significant side effects impacting quality of life and treatment adherence.

Few studies have explored the epidemiological link between migraine and breast cancer, and none have examined migraine evolution during endocrine therapy.

## AIM

Our aim was to:

☞ examine the evolution of migraine during endocrine therapy for breast cancer.

## METHODS

**Study design:** retrospective observational study

**Population:** All women affected from migraine with a history of breast cancer who attended the Headache Centre of IRCCS-ISNB between October 1, 2024, and March 31, 2025.

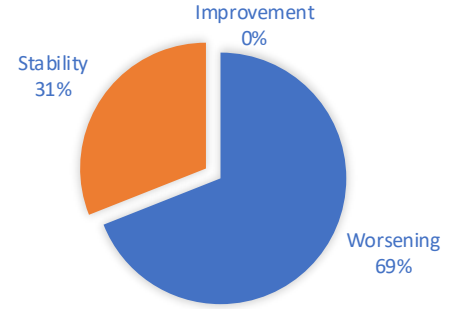
We reviewed the severity of their migraine before and after hormonal therapy, trough clinical notes, headache diary, changes of preventive therapy and attack treatments.

## RESULTS

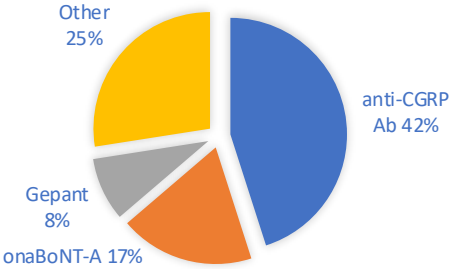
Eighteen women (mean age at cancer diagnosis: 51.2 years) were included.

Thirteen received endocrine therapy: 69% reported **migraine worsening**, 31% remained stable, and none improved. Among those with worsening symptoms, 44% (4/9) converted from episodic to chronic migraine. Overall, 65% (11/18) reported increased frequency and 56% (10/18) greater intensity.

**Treatment adjustments** were frequent: 62% changed acute, and 67% preventive therapy. Of those modifying preventive therapy, 50% reported benefit. Among 12 who changed preventive therapy, 42% received anti-CGRP monoclonal antibodies, 17% OnabotulinumtoxinA, 17% both treatments sequentially, 8% a gepant, and 8% other usual therapies. One patient experienced recurrence and worsening of aura after Tamoxifen initiation.




**Graph. 1** Migraine changes during hormonal treatment




**Graph. 2** Treatment adjustments

## CONCLUSION

Our results suggest a strong impact of **oncological endocrine therapy** for breast cancer on migraine natural history, **increasing the frequency, the intensity of migraine attacks** and the burden for afflicted women. These findings support the need for multidisciplinary collaboration between oncologists and headache specialists. However larger prospective studies are warranted to confirm these results.

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