INTRODUCTION

Up to one in four early breast cancer (EBC) patients develop metastases despite remarkable progress in early diagnosis and local treatment, while this risk of relapse depends on clinical and molecular patient characteristics. Systemic treatment is commonly used in EBC with the intention to reduce the risk of relapse and death. Breast cancer outcomes and survival can be explained by several variables, which are currently recommended to improve the efficacy, but the tolerability and — more importantly — their long-term toxicity profiles remain a concern to balance the cure benefit while maintaining patients’ quality of life.

Despite the amount of evidence relating obesity and survival in BC patients, several studies looking at the relationship between body mass index (BMI) and outcomes in EBC patients treated with adjuvant chemotherapy (CT) have shown conflicting results [5,6]. In addition, there are limited data on the long-term efficacy of taxanes among the different BMI categories. Moreover, no authors have evaluated the prognostic effect of BMI on disease recurrence for different types of taxane-based adjuvant chemotherapy (paclitaxel versus docetaxel). Similarly, there are no conclusive results of the impact of BMI on the outcomes of EBC patients receiving adjuvant taxane-based regimens. The purpose of the current analysis is to evaluate the relationship between BMI and disease recurrence for the different CT schemes in a series of patients included in GEICAM/ TRI-0601 studies.

OBJECTIVES

Primary Objectives:

- Invasive-Disease-Free Survival (DFS) according to BMI categories (normal, overweight, obese and severely obese) within the following groups:
  - Docetaxel-based adjuvant CT vs. non-docetaxel based adjuvant CT.
  - Paclitaxel-based adjuvant CT vs. non-paclitaxel based adjuvant CT.
  - All patients regardless of CT regimen.

Secondary Objectives:

- Invasive-Disease-Free Survival (DFS) according to BMI categories (normal, overweight, obese and severely obese) within the following groups:
  - Taxane-based CT vs. non-taxane-based CT.
  - Chemically relevant Adverse Events (AlEs) (grade >3) according to BMI categories (normal, overweight, obese and severely obese) within the following groups:
    - Docetaxel-based adjuvant CT vs. non-docetaxel based adjuvant CT.
    - Paclitaxel-based adjuvant CT vs. non-paclitaxel based adjuvant CT.
  - Taxane-based CT vs. non-taxane-based CT.

- Median age was 50 years (range: 20-76).

MATERIALS AND METHODS

- The analysis includes data from 2 groups: "EBC" and "syrphitode-nipple-negative (E)C") operable BC patients treated with adjuvant anthracyclines and taxanes that were enrolled in 7 GEICAM/TRYO studies: GEICAM 2000-05, GEICAM 2000-02, GEICAM 2005-02, GEICAM 2007-03, GEICAM 2007-05, GEICAM 2009-05 and GEICAM 2013-03. The median follow-up was 79.1 months (5.7-13.3).
- Patients were eligible to be included in the analysis if they met all the following criteria: 1) Stages I-IIIA, 2) Have received taxane-based CT in adjuvant setting, 3) received eBC, 4) Received at least one dose of taxane-based CT.
- This was performed using the Cox proportional hazards model with the variable of interest and stratified by study.

RESULTS

- Table 3. iDFS by treatment regimens and BMI category

- Table 4. DFS by treatment regimens, BMI category and Relative Dose Intensity (RDI)

- Table 5. Clinical Toxicities by BMI category

CONCLUSIONS

- Prospective is worse in heavier vs. leaner EBC patients receiving adjuvant taxane-based CT.
- Leaner patients receiving Docetaxel (compared to non-Docetaxel) achieved a better outcome, while patients who benefited most from Paclitaxel were the obese subgroup (compared to non-Paclitaxel).
- This analysis is of great importance due to the high and increasing prevalence of obesity.

- More than 50% of the patients included in the analysis are overweight or obese.

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The advance events (AEs) of grade equal or greater than 3 of high clinical relevance were reported in 4.7%, 4.7%, 9.8% and 6.5% of patients in the normal, overweight, obese, and severely obese BMI categories, respectively.

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