TRIPLE-NEGATIVE BREAST CANCER (TNBC) – A NEW PERSPECTIVE ON BIOMARKERS

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INTRODUCTION

TNBCs generally account for 15-20% of all breast cancers, depending on the reference series [1-4]. TNBCs are definitely tumors with a high rate of relapse and progression to conventional systemic therapies, and there is a strong need to explore reliable biomarkers in order to ensure better outcomes for this specific group of patients[5]. The Brazilian national data on breast cancer subtypes are quite scarce, with no mention of the specific evaluation of TNBCs for their biomarkers [6]. Our cohort proposes to make a broad profile of this tumor subtype, so that it can later be projected for a national estimate[7].

METHODS

Primary Objectives: Measure the prevalence of the biomarkers AR, PD-L1, PD-L2, EGFR, CK5/6, CK14, CK 17, CD 117, CD8 + TILs, levels of Ki67 and p53 expression, histological grade and perineural and angiovascular invasion in initial sample of patients with locally advanced TNBC tumors submitted to neoadjuvant chemotherapy at INCA.
Sencodary Objectives: Analytically, verify the influence of the status of the biomarkers on the rate of complete pathological response (CPR) and disease-free survival (DFS). Measure the frequency of biomarkers negativation following neoadjuvant chemotherapy in patients with residual infiltrating tumors. Verify if there is an association between the negativation of the biomarkers and the SLD. Indeed verify if there is any association between socio-demographic variables (race, age at diagnosis, schooling, time of diagnosis, time of end of neoadjuvant chemotherapy for surgical resection and distance from the residence to the center of treatment) and CPR and DFS.

INCLUSION CRITERIA

Patients older than 18 years with locally advanced TNBC (T3-4NqqM0; TqqN1-3M0) treated with neoadjuvant chemotherapy at INCA, with pathological material reviewed at the Department of Pathology between January 2009 and December 2014. It is estimated the inclusion of 250 patients.

RESULTS

No statistical analysis has been made yet.

CONCLUSION

The study is still ongoing. The construction of TMAs has already begun. The Informed Consent Terms and epidemiological data on medical records were collected.

REFERENCES

1. Jemal A, Bray F, Center MM, et al. Global cancer statistics. CA Cancer J Clin 2011; 61:69.
2. Estimativa 2016: incidência de câncer no Brasil / Instituto Nacional de Câncer José Alencar Gomes da Silva – Rio de Janeiro: INCA, 2015.
3. Perou C, Sorlie T, Eisen MB, et al: Molecular portraits of human breast tumors. Nature 206:747-752, 2000
4. Dent R, et al. Triple-negative breast cancer: clinical features and patterns of recurrence. Clin Cancer Res. 2007;13:4429–34.
5. Carey LA, et al. The triple negative paradox: primary tumor chemosensitivity of breast cancer subtypes. Clin Cancer Res. 2007;13:2329–34.
6. Tischkowitz M, et al. Use of immunohistochemical markers can refine prognosis in triple negative breast cancer. BMC Cancer. 2007;7:134.
7. Bauer KR, et al. Descriptive analysis of estrogen receptor (ER)-negative, progesterone receptor (PR)-negative, and HER2-negative invasive breast cancer, the so-called triple-negative phenotype: a population-based study from the California cancer registry. Cancer. 2007;109:1721–8.

Footnote: This study has no source of financial support.

Projeto Gráfico: Setor de Edição e Informação Técnico-Científica / INCA