Conflict of Interest: No significant relationships.

Predictive and prognostic factors

P106
The effects of prognostic factors on metastasis and survival of patients with breast cancer using a multi-state model
E. Babaee1*, M. Nojomi2, N. Nafissi1. 1Preventive Medicine and Public Health Research Center, Student Research Committee, Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of; 2Preventive Medicine and Public Health Research Center, Psychosocial Research Health Institute, Department of Community and Family Medicine, School of Medicine, Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of

Goals: Breast cancer is the most common type of cancer in women worldwide. The multi-state models help in more closely studying the factors affecting the survival of patients with this cancer. Therefore, in this study, we aimed to analyze breast cancer data using the multi-state model.

Methods: This was a registry-based retrospective cohort study conducted on 2030 Iranian patients with breast cancer in 2020. Data were obtained from the patients’ electronic medical records. Notably, the patients’ follow-up time varied from one month to 15 years. In this regard, the initial treatment, metastasis, and death are considered as the first, second, and absorbing states, respectively. The multi-state model was utilized for modeling and analyzing the data at a 95% significance level using the MSM package in R software.

Results: The mean age (±SD) of the patients included at diagnosis time was 55.3 (±12.07) years old. The first one-year and 5-years adjusted transition probabilities for transitions from treatment to metastasis were estimated as 0.85 (0.15–0.89) and 0.45 (0.21–0.61), and for metastasis to death transitions, they were estimated as 0.15 (0.1–0.21) and 0.55 (0.41–0.69), respectively. The EBRT method [HR: 7.39, (0.19–28.74)], stage greater than or equal to I [HR: 1.14, (0.66–20.88)], and tumor grade greater than or equal to II [HR: 6.48, (0.55–28.39)] had an increased hazard on the transitions from treatment to metastasis state. Moreover, the average sojourn times were estimated as 0.27 and 74.85 months for the treatment and metastasis states, respectively.

Conclusion[s]: The multi-state models by providing valuable information can help to explain the factors affecting the natural course of diseases for clinical usage compared to the other survival models.

Conflict of Interest: No significant relationships.

Poster Abstracts / The Breast 56S1 (2021) S17–S50

P107
Breast cancer after in vitro fecundation (IVF): can ovary stimulation and follicular response affect prognostic factors?
M. Izquierdo1*, 1Department Obstetrics, Gynecology and Reproduction, Dexeus University Hospital, Barcelona, Spain

Goals: The follicular response is related with estradiol level. Study in breast cancer patients after IVF if ovarian response or number of IVF cycles affects the prognostic factors.

Methods: Patients with breast cancer who underwent IVF are studied. The multi-state models help in more closely studying the factors affecting the outcome of breast cancer following IVF. The prognostic factors Ki-67, HER2, estrogen receptor (ER), progestosterone receptor (PR), and histologic grade were analyzed.

Results: A total of 135 cycles of IVF were performed and the patients were analyzed for: (1) the visible growth period of the PT and sdMTSs; (2) the growth processes of the PT and sdMTSs in patients without or with lymph node metastases (MTSs) in accordance with the 8th edition AJCC prognostic staging system for breast cancer. The CoMPaS model reflects: (1) the non-visible growth period of the PT; (2) the visible growth period of the PT (appearance of the sdMTSs in other parts of body); (3) the non-visible growth period of the sdMTSs; and (4) the visible growth period of the sdMTSs.