**Breast Cancer (BC) related fatigue:**

A longitudinal investigation of its prevalence, domains, and correlates

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**Background**

- Fatigue is a complex and multidimensional symptom that is recognized as one of the most distressing symptoms in cancer survivors. During treatment the most reported symptom was fatigue, which was found to be strongly associated with a variety of factors including demographic factors, health status, and treatment characteristics. After completion of treatment, a significant portion of patients continue to experience severe distressing symptoms, and limited data suggest that at 10 years post-treatment, 20% of survivors still suffer from severe fatigue.**

- Objective: to characterize longitudinal trajectories of fatigue after breast cancer treatment, and explore fatigue trajectories.

**Patients and Methods**

- **Patient selection:** Prospective longitudinal cohort of patients with early BC treated between 2012-2016 across 26 French cancer centers (CARES / SOTCI, ISTHMSEFF, Marché end of accrual at 12/08 to end of 2018), for the present analysis we included patients with a breast cancer diagnosis who responded to all follow-ups (n=5,805).
- **Variables of Interest:** Domain scores: fatigue in five domains (physical, emotional, social, functional, cognitive). The main outcome was overall fatigue and EORTC 13 ( bodily, physical, emotional and cognitive domains of fatigue).
- **Analyses:** Descriptive, clinical, factor, time characteristic, univariate and multivariate analyses on pre-treatment and EORTC 13 (body, physical, emotional, cognitive) and psychological characteristics including anxiety and depression as per the Hospital Anxiety and Depression Scale (HADS). The significance level was set at p < 0.05

**Results**

- **Fatigue domains**

- **Physical fatigue**

- **Emotional fatigue**

- **Social fatigue**

- **Cognitive fatigue**

- **Functional Fatigue**

**Conclusions**

- 1/3 of patients report overall severe fatigue after breast cancer diagnosis and treatment.
- The prevalence of fatigue diverges by Fatigue dimension (emotional, physical, and cognitive).
- The utilization of clustering techniques allowed the identification of a high risk fatigue group.
- There are clusters of patients with over 90% risk of experiencing severe fatigue at almost 2 years after diagnosis.
- Psychological distress and symptoms at baseline and overtime impact the development of all fatigue dimensions, nevertheless we found some heterogeneity in how the trajectories of fatigue evolve across different subgroups of patients.
- Our data aid in the identification of patients who have increased risk of severe fatigue over time and highlight the need for personalized interventions to ameliorate this burdensome problem.

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