

SUPPORTIVE CARE AND SURVIVORSHIP

1830 Use of physical activity (PA) and supportive care (SC) among patients (pts) with early breast cancer (BC) reporting cancer-related fatigue (CRF)

A. Di Meglio¹, C. Charles², E. Martin¹, J. Havas¹, A.S. Gbenou¹, A-L. Martin³, S. Everhard⁴, E. Laas⁴, O. Tredan⁵, L. Vanlemmens⁶, C. Jouannaud⁷, C. Levy⁸, O. Rigal⁹, M. Fournier¹⁰, P. Soulie¹¹, A. Dumas¹², G. Menvielle¹³, F. André¹, S. Dauchy², I. Vaz-Luis¹

¹INSERM UMR 981, Gustave Roussy, Villejuif, France; ²DISSPO, Gustave Roussy, Villejuif, France; ³R&D, Unicancer, Paris, France; ⁴Medical Oncology, Institut Curie, Paris, France; ⁵Medical Oncology, Centre Léon Berard, Lyon, France; ⁶Medical Oncology, Centre Oscar Lambret, Lille, France; ⁷Medical Oncology, Institut Jean Godinot, Reims, France; ⁸Medical Oncology, Centre François Baclesse, Caen, France; ⁹Medical Oncology, Centre Henri Becquerel, Rouen, France; ¹⁰Medical Oncology, Institut Bergonié, Bordeaux, France; ¹¹Medical Oncology, Institut de Cancérologie de l'ouest -Paul Papin, Angers, France; ¹²Université de Paris, ECEVE UMR 1123, INSERM, Paris, France; ¹³Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Paris, France

Background: CRF is highly prevalent in early BC. PA and psychosocial interventions were proven to be effective in several meta-analyses and are recommended management strategies for CRF. Some randomized trials support the use of acupuncture, while there are no data showing benefits of homeopathy for CRF. We aimed to assess use of PA and SC among pts with early BC.

Methods: Pts with stage I-III BC were prospectively included from the CANTO cohort (NCT01993498). Baseline CRF was evaluated shortly after treatment using EORTC-C30 for global CRF and EORTC-FA12 for its physical, emotional and cognitive domains. A score of 40 or higher defined CRF as severe (Abrahams HJ, Ann Oncol 2016). Data on adherence to PA recommendations (10 MET-hours/week or more) and SC consultations with a psychologist, acupuncturist or homeopath were collected in CANTO and therefore served as outcomes. Multivariable logistic regression examined associations between baseline CRF status (severe v not) and use of PA or SC consultations over the 12 months after baseline CRF assessment. Covariates included socio-demographics and psychological distress.

Results: Among 9691 pts included in CANTO, 6282 had available data on PA and 7598 on SC consultations. At baseline, 36% pts reported severe global CRF, and 36%, 23% and 14% pts reported severe physical, emotional and cognitive CRF, respectively. Overall, 64% pts were adherent to PA recommendations and only 10% pts saw a psychologist, whereas 8% saw an acupuncturist and 7% a homeopath. Pts reporting severe global CRF (v not severe) were less likely to adhere to PA recommendations (60% v 67%; adjusted odds ratio [aOR] 0.82, 95% CI 0.72-0.94), but more likely to see a psychologist (14% v 7%; aOR 1.31, 1.07-1.59), acupuncturist (10% v 6%; aOR 1.51, 1.22-1.86) or homeopath (10% v 6%; aOR 1.55, 1.25-1.92). There were differences in use of PA and SC consultations by CRF domain: pts reporting severe physical CRF showed lower adherence to PA (59% v 67%; aOR 0.73, 0.63-0.85), whereas pts with severe emotional CRF were more prone to psychology consultations (17% v 8%; aOR 1.41, 1.10-1.82).

Conclusions: This large study calls for the need to optimize and personalize the uptake of recommendations to manage CRF among pts with early BC.

Clinical trial identification: NCT01993498.

Legal entity responsible for the study: Unicancer.

Funding: Agence nationale de la Recherche (ANR-10-COHO-0004); Susan G. Komen (CCR17483507 to I. Vaz-Luis); Odyssea; Gustave Roussy.

Disclosure: A. Di Meglio: Honoraria (self): ThermoFisher. I. Vaz-Luis: Honoraria (self): Novartis; Honoraria (self): Kephren; Honoraria (self): AstraZeneca; Advisory/Consultancy: Ipsen; Honoraria (self): Amgen. All other authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2020.03.122>

1840 The risk of late breast cancer recurrence in Denmark during 17 years of follow-up

R.N. Pedersen¹, B. Öztürk¹, L. Mellemkjær², S. Friis², B. Ejlersen³, T. Lash⁴, M. Nørgaard¹, D. Cronin-Fenton¹

¹Department of Clinical Epidemiology, Aarhus University, Aarhus, Denmark; ²Danish Cancer Society Research Center, Copenhagen, Denmark; ³Clinical Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; ⁴Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA, USA

Background: Breast cancer (BC) may recur many years after primary diagnosis. We investigated the incidence of late breast cancer recurrence (BCR) (>= 10 years after primary surgery) and identified potential associations between clinico-pathological factors at baseline and late BCR.

Methods: Using the Danish Breast Cancer Group's (DBCG) database we identified all women with incident stage I-III operable BC diagnosed during 1987-2002, who were alive and without a recurrence or new primary cancer 10 years after diagnosis. We derived an algorithm to identify late BCR using Danish population-based registries. Follow-up began 10 years after primary surgery date and continued until late BCR, death, emigration, second cancer or 31/12/2013. Crude incidence rates (IRs) per 1,000 person-years (PY) and cumulative incidence proportions (CIPs) for late BCR were calculated by patient- and tumor characteristics at baseline. Cox regression models were used to calculate hazard ratios (HRs), accounting for competing risks. The HRs were adjusted for tumor- and patient characteristics.

Results: 18,117 women of 31,528 (57%) reached year 10 without BC recurrence, a contralateral breast cancer or other primary cancer, and were followed for a total of 106,602 PY with a median follow-up of 4.9 years (IQR; 2.4-8.7). Of these 10-year survivors, 1,763 developed late BCR corresponding to an IR of 16.5 (95% CI, 15.8-17.3) per 1,000 PY and a CIP of 15% maximum 27 years after primary diagnosis. The CIP was higher among patients with estrogen receptor (ER)⁺ tumors, stage III disease and high nodal status. We found an adjusted HR of 3.0 (95% CI, 2.47-3.55) for patients with 4 or more positive lymph nodes versus patients with no lymph node involvement, an adjusted HR of 1.85 (95% CI, 1.59-2.15) for patients with stage III disease versus stage I disease and an adjusted HR of 0.57 (95% CI, 0.45-0.72) for patients with an ER⁺ tumor versus patients with an ER⁻ tumor.

Conclusions: Our findings suggest that women with breast cancer can remain disease-free for at least ten years, but recurrences continue to occur from 10 to 27 years after primary diagnosis. Baseline tumor characteristics such as lymph node status, stage, and ER receptor status seems to be associated with late breast cancer recurrence.

Legal entity responsible for the study: Aarhus University.

Funding: The Danish Cancer Society.

Disclosure: B. Ejlersen: Research grant/Funding (institution), Research funding to my institution from NanoString, Roche, Novartis, and Oncology Venture: Rigshospitalet, Copenhagen University Hospital. All other authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2020.03.123>

186P Using a new controlled thermotherapy (Hilothermy®) during chemotherapy prevents chemotherapy induced polyneuropathy (CIPN)

T. Schaper, B. Gross, L. Franzmann, M. Darsow

Luisenkrankenhaus, Luisenkrankenhaus GmbH & Co KG, Düsseldorf, Germany

Background: Chemotherapy-induced peripheral neuropathy (CIPN) is an adverse effect of many commonly used chemotherapeutic agents, especially taxane-based regimen (Paclitaxel, nab-Paclitaxel, Docetaxel). CIPN reduces patients health-related quality of life for years and often results in dose delay, dose reduction or treatment discontinuation. The prophylactic use of controlled thermotherapy (Hilothermy®) prevents CIPN.

Methods: 168 breast cancer patients used a new method of physical thermotherapy, a device equipped with hand and foot cuffs to allow a constant cooling. Cooling medium is demineralized water. Continuous cooling of hands and feet was performed 30 minutes before to 60 minutes after completing drug infusion with a temperature of 10-12°C. CIPN symptoms were evaluated after each cytotoxic cycle using common terminology criteria for adverse events (CTCAE). Sustainability of the impact was assessed by long-term data (every 3 months). 130 patients used the prophylactic Hilothermy® for each cytotoxic treatment (Group 1: primary Prophylactic Hilothermy® - pPHT). 38 patients used reactive secondary Hilothermy (Group 2: rSHT). Hands and feet were cooled after onset of symptoms of CIPN (grade 1-3).

Results: Group pPHT: Out of 130 patients who used pPHT, 121 patients (93%) developed none or mild symptoms of CIPN (grade 0-1). 8 patients (6.1%) reported grade 2, 1 patient grade 3 (0.8%) toxicity. The symptoms of CIPN were reversible. 4 months after chemotherapy, 98% of the patients had no CIPN > grade 1. 2 patients (2%) suffered intermittent toxicity grade 2. Follow Up data confirmed the results. Group rSHT: Without using pPHT 50% of the patients developed grade 3 and 2 CIPN. Using rSHT progression was stopped and reduction of toxicities was reached: at last chemotherapy treatment grade 2 & 3 toxicities were reduced from 50% to 25%.

Conclusions: Prophylactic Hilothermy prevented symptoms > grade 1 in 93% of patients. 4 months after chemotherapy treatment, 98% of the patients were without limiting symptoms > grade 1. No dose modifications or treatment interruptions had been necessary. Without pPHT, 50 % of the patients developed CIPN grade 2-3. rSHT stopped progression of CIPN and reduced first symptoms of CIPN.

Legal entity responsible for the study: Trudi Schaper.

Funding: Hilotherm provided the chemo care technical devices.

Disclosure: T. Schaper: Honoraria (self), Advisory/Consultancy, Travel/Accommodation/Expenses: Paxman; Honoraria (self), Advisory/Consultancy, Travel/Accommodation/Expenses, Full/Part-time employment: Hilotherm; Honoraria (self), Travel/Accommodation/Expenses: Roche; Honoraria (self), Advisory/Consultancy: Luisenkrankenhaus. M. Darsow: Honoraria (self), Advisory/Consultancy: Roche; Honoraria (self), Advisory/Consultancy: Novartis; Honoraria (self), Advisory/Consultancy: Amgen; Honoraria (self), Advisory/Consultancy: Genomic Health. All other authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2020.03.125>

187P Patient-reported outcomes near end-of-life in patients with breast cancer

A. Batra¹, C. Cuthbert², R. Rigo¹, A. Harper³, D. Boyne⁴, L. Yang³, W. Cheung¹

¹Medical Oncology, Tom Baker Cancer Center, Calgary, AB, Canada; ²Nursing, University of Calgary, Calgary, AB, Canada; ³Cancer Epidemiology and Prevention Research, Alberta Health Services, Calgary, AB, Canada; ⁴Community Health Sciences, Alberta Health Services, Calgary, AB, Canada

Background: There are limited data on symptom burden in patients dying with breast cancer. This study aimed to assess the burden of symptoms near end-of-life in a real-world cohort of patients with breast cancer using patient-reported outcomes (PROs).

Methods: Patients with breast cancer who completed the revised version of Edmonton Symptom Assessment System (ESASr) questionnaire within 6 months of death in a large Canadian province from 2016 to 2019 were eligible for the study. The symptoms within physical and psychological categories were categorized as mild (0-3), moderate (4-6), and severe (7-10). We further compared the severity of symptoms with time-to-death (TTD), categorized as 0-90 days and 91-180 days from completing the ESASr questionnaire.

Results: We identified 188 patients with breast cancer for the current analysis, with median age of 63 (interquartile range: 32-89) years. The physical, and psychological symptoms were severe in 18%, and 14%, respectively. While severe tiredness and drowsiness were the most common physical symptoms, severe anxiety was reported more frequently than depression. There was no association of age of the patients with severity of symptoms. Although psychological symptoms were not related with TTD, total and physical symptoms scores were more likely to be severe in patients within 90 days of death (21% vs 8%, P=0.007; 26% vs 8%, P=0.003, respectively), as compared to those who were 91-180 days from death. This was contributed predominantly by tiredness (P=0.02) and shortness of breath (P=0.001). The proportion of patients who rated overall wellbeing as severe was twice (41% vs 20%, P=0.01) as common during the final 90 days of life, when compared with those who were 91-180 days from death.

Symptom	TTD: 0-90 days (n = 136)	TTD: 91-180 days (n = 52)	P-value
Physical	35 (26%)	4 (8%)	0.003
Pain	39 (29%)	13 (25%)	0.19
Tiredness	73 (54%)	16 (31%)	0.02
Drowsiness	52 (39%)	12 (23%)	0.08
Nausea	23 (17%)	4 (8%)	0.2
Lack of appetite	48 (35%)	10 (19%)	0.08
Shortness of breath	38 (28%)	3 (6%)	0.001
Psychological	21 (15%)	9 (17%)	0.84
Depression	20 (15%)	9 (17%)	0.88
Anxiety	26 (19%)	8 (16%)	0.84
Others wellbeing	51 (41%)	10 (20%)	0.01
Total score	28 (21%)	4 (8%)	0.007

Conclusions: There is significant deterioration of unique symptoms when patients with breast cancer approach end-of-life, as reported in PROs, using ESASr. Symptom targeted palliative measures are likely to alleviate burden of symptoms near end-of-life and thereby improving the 'quality of death'.

Legal entity responsible for the study: The authors.

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2020.03.126>

188P Impact of HIV infection (HIV+) on baseline characteristics and survival of breast cancer (BC) patients (pts): A systematic review and meta-analysis

M.D.R.A. Brandão¹, M. Bruzzone², M.A. Franzoi¹, C. de Angelis¹, D. Eiger¹, R. Caparica³, N. Dauby³, M. Ceppi², M. Piccart⁴, C. Carrilho⁵, N. Lunet⁶, L. Buisseret⁴, E. de Azambuja¹, M. Lambertini²

¹Academic Trials Promoting Team, Institut Jules Bordet, Brussels, Belgium; ²IRCCS Ospedale Policlinico San Martino, University of Genoa, Genoa, Italy; ³Infectious Diseases Department, Centre Hospitalier Universitaire Saint-Pierre, Bruxelles, Belgium; ⁴Medical Oncology, Institut Jules Bordet, Brussels, Belgium; ⁵Pathology Department, Faculty of Medicine University Eduardo Mondlane, Maputo, Mozambique; ⁶EPI Unit, Instituto de Saúde Pública da Universidade do Porto, Porto, Portugal

Background: The number of HIV+ women diagnosed with BC is increasing. Yet, data are conflicting regarding their stage at diagnosis, distribution of BC subtypes and prognosis. We aimed to assess differences in baseline characteristics and overall survival (OS) between HIV+ vs HIV-uninfected (HIV-) BC pts.

Methods: Systematic review using MEDLINE, Scielo and conference abstracts (hand search of studies presented in major meetings) up to 1 Jan 2020 with no language restrictions was performed. Cross-sectional or cohort studies comparing baseline characteristics (mean age, stage or BC subtypes) or OS of HIV+ vs HIV- BC pts were included. Main endpoints were age, late stage at diagnosis, proportion of subtypes and OS. Subgroup analyses were performed according to world region. Other endpoints were detailed stage and estrogen receptor (ER) status. Summary estimates (pooled mean age ratios [MR], odds ratios [OR] and hazard ratios [HR]) were calculated using random effects models.

Results: 20 publications (5 from North America, 15 from Sub-Saharan Africa [SSA]) were included, with 3,174 HIV+ and 2,394,598 HIV- pts. Mean age was 18% lower among HIV+ pts vs HIV- pts (MR 0.82, 95% CI 0.76-0.89) and HIV+ pts had a 53% increased risk of presenting with late stage BC (OR 1.53, 95% CI 1.37-1.71). HIV+ pts had smaller odds of having ER+/HER2- BC, but there were no differences regarding other subtypes (Table). HIV+ pts had a 90% increased risk of dying compared to HIV- pts (adjusted HR 1.90, 95% CI 1.21-2.99), with similar results in North America and SSA.

		HIV+ pts	HIV- pts	Pooled estimate (95% CI)	P
Age	All	144	316	MR 0.82 (0.76-0.89)	<.001
Late stage (III/IV)	All	3014	2331751	OR 1.53 (1.37-1.71)	<.001
	SSA	1374	6107	OR 1.38 (1.22-1.57)	<.001
	North America	1640	2325643	OR 1.76 (1.58-1.95)	<.001
ER+/HER2-	All	498	1925	OR 0.81 (0.66-0.99)	.043
HER2+	All	519	1969	OR 1.10 (0.80-1.52)	.553
TNBC	All	610	3147	OR 1.14 (0.90-1.43)	.269
Luminal A	All	326	1957	OR 0.65 (0.42-1.02)	.059
Luminal B	All	326	1957	OR 1.03 (0.79-1.35)	.800
HER2-enriched	All	326	1957	OR 1.08 (0.49-2.38)	.842
OS (adjusted)	All	1741	1561217	HR 1.90 (1.21-2.99)	.005
	SSA	291	890	HR 1.58 (1.25-1.98)	<.001
	North America	1426	1560131	HR 2.45 (1.11-5.41)	.026
OS (unadjusted)	All	291	890	HR 1.43 (1.06-1.92)	.019

Conclusions: HIV+ pts are diagnosed with BC at a younger age and at a later stage. Even after adjusting for prognostic factors, HIV+ pts have a worse OS as compared to HIV- pts, both in SSA and North America. Further studies are needed to decipher the reasons behind these disparities that can be related to HIV infection, distinct BC biology and anti-cancer immune response and/or to a lower access to timely diagnosis and effective treatment.

Legal entity responsible for the study: The authors.

Funding: Has not received any funding.

Disclosure: M.D.R.A. Brandão: Speaker Bureau/Expert testimony, Travel/Accommodation/Expenses: Roche/Genentech. D. Eiger: Research grant/Funding (institution): Novartis. R. Caparica: Speaker Bureau/Expert testimony, Travel/Accommodation/Expenses: AstraZeneca; Speaker Bureau/Expert testimony: Boehringer Ingelheim; Speaker Bureau/Expert testimony: Janssen; Travel/Accommodation/Expenses: Pfizer. M. Piccart: Honoraria (self), Officer/Board of Directors: Oncolytics; Research grant/Funding (institution), Officer/Board of Directors: Radius; Honoraria (self), Research grant/Funding (institution): AstraZeneca; Honoraria (self): Camel-IDS; Honoraria (self): Crescendo Biologics; Honoraria (self): Debiopharm; Honoraria (self): G1 Therapeutics; Honoraria (self); Research grant/Funding (institution): Roche/Genentech; Honoraria (self): Huya; Honoraria (self): Immunomedics; Honoraria (self); Research grant/Funding (institution): Lilly; Honoraria (self): Menarini; Honoraria (self); Research grant/Funding (institution): MSD; Honoraria (self); Research grant/Funding (institution): Novartis; Honoraria (self): Odonate; Honoraria (self): Periphen; Honoraria (self); Research grant/Funding (institution): Pfizer; Honoraria (self): Seattle Genetics; Research grant/Funding (institution): Servier; Research grant/Funding (institution): Synthon. L. Buisseret: Travel/Accommodation/Expenses: Roche; Research grant/Funding (institution): AstraZeneca; Speaker Bureau/Expert testimony: BMS. E. de Azambuja: Advisory/Consultancy, Research grant/Funding (institution), Travel/Accommodation/Expenses: Roche/GNE;