

powered by



GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION

Contribution ID: 406

Type: 1 - Scientific Poster

Association between physical activity and mortality among breast cancer survivors

Purpose:

It is known that a greater physical activity (PA) reduces the risk of breast cancer (BC). Nevertheless, there is still limited evidence about what role PA may play in the prognosis of the disease. The aim of this study was to assess the association of pre- and postdiagnosis PA with overall and BC-specific mortality among BC survivors.

Methods:

A total of 13,399 BC survivors from the European Prospective Investigation into Cancer and Nutrition (EPIC) study were included. During the follow-up period (average 8.6 years) 2,380 women died, of whom 1,480 from BC. The main exposure was an overall measure of PA derived from a PA index (PA at work and leisure-time activities). We further analysed recreational PA (walking, cycling and sport activities). A subset of 2,023 survivors completed a second questionnaire within a 6-month to 4-year postdiagnosis. Multivariable Cox and Fine-Gray models were employed to evaluate the association of PA with overall and BC-specific mortality respectively, adjusted for relevant confounders.

Results:

BC survivors who were physically active before diagnosis had a 14% lower risk of all-cause mortality (HR 0.86, 95% CI: 0.78-0.95), and 12% lower risk of BC-specific mortality (HR 0.88, 95% CI: 0.77-1.00). PA postdiagnosis was associated with a lower risk of overall and BC-specific mortality of 43% (HR 0.57, 95% CI: 0.44-0.75) and 52% (HR 0.48, 95% CI: 0.34-0.68), respectively. A significant lower risk of mortality was also observed among those who practiced recreational PA after diagnosis. Women who became active at postdiagnosis had lower risk of overall mortality (HR 0.48, 95% CI 0.27-0.83) and BC-specific mortality (HR 0.35, 95% CI 0.16-0.74).

Conclusion:

Being physically active (pre- and postdiagnosis) reduces the risk of mortality among BC survivors. Additionally, changes towards higher levels of PA seem to have also positive impact on survival.

Keywords

Breast Cancer, Physical Activity, Survival, Prospective study

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

Author: NADAL ZARAGOZA, Nuria (Unit of Nutrition and Cancer, Cancer Epidemiology Research Program, Catalan Institute of Oncology-ICO, L'Hospitalet de Llobregat, Barcelona, Spain /Nutrition and Cancer Group, Epi-

demology, Public Health, Cancer Prevention and Palliative Care Program, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain/Deutsches Krebsforschungszentrum /Programa de doctorat d'Alimentació i Nutrició, Facultat de Farmàcia i Ciències de l'Alimentació, Universitat de Barcelona, Barcelona, Spain.)

Co-authors: Ms BONET, Catalina (Unit of Nutrition and Cancer, Cancer Epidemiology Research Program, Catalan Institute of Oncology-ICO, L'Hospitalet de Llobregat, Barcelona, Spain./ Nutrition and Cancer Group, Epidemiology, Public Health, Cancer Prevention and Palliative Care Program, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain.); Dr CASTRO-ESPIN, Carlota (International Agency for Research on Cancer, World Health Organization, Lyon, France.); Dr JAVIERRE, Casimiro (Departament de Ciències Fisiològiques, Facultat de Medicina, Universitat de Barcelona, Barcelona, Spain.); Dr ANTONIUSSEN, Christian S. (Department of Public Health, Aarhus University.); Dr DAHM, Christina C. (Department of Public Health, Aarhus University.); Dr GUÉNEL, Pascal (Paris-Saclay University, UVSQ, Inserm, Gustave Roussy, CESP, Villejuif, France.); Dr ARTAUD, Fanny (Paris-Saclay University, UVSQ, Inserm, Gustave Roussy, CESP, Villejuif, France.); Dr FOURNIER, Agnès (Paris-Saclay University, UVSQ, Inserm, Gustave Roussy, CESP, Villejuif, France.); Dr FORTNER, Renée Turzanski (Division of Cancer Epidemiology, German Cancer Research Center, Heidelberg, Germany. / Department of Research, Cancer Registry of Norway, Norwegian Institute of Public Health, Oslo, Norway.); Dr KATZKE, Verena (Division of Cancer Epidemiology, German Cancer Research Center, Heidelberg, Germany.); Dr SCHULZE, Matthias B. (German Institute of Human Nutrition Potsdam-Rehbruecke, Nuthetal, Germany. / Institute of Nutritional Science, University of Potsdam, Nuthetal, Germany); Ms MASALA, Giovanna (Clinical Epidemiology Unit, Institute for cancer research, prevention and clinical network (ISPRO) Florence, Italy); Dr PALA, Valeria (Epidemiology and Prevention Unit, Fondazione IRCCS Istituto Nazionale dei Tumori di Milano Via Venezian, 1. 20133 Milan, Italy); Dr SIMEON, Vittorio (Medical Statistics Unit, University of Naples, Italy); Dr TUMINO, Rosario (Hyblean Association for Epidemiology Research, AIRE ONLUS Ragusa, Italy); Mr FRANCO, Matteo (Centre for Biostatistics, Epidemiology and Public Health (C-BEPH), Department of Clinical and Biological Sciences, University of Turin, 10043 Orbassano, Italy.); Dr REDONDO-SÁNCHEZ, Daniel (Escuela Andaluza de Salud Pública (EASP), 18011 Granada, Spain / Instituto de Investigación Biosanitaria ibs.GRANADA, 18012 Granada, Spain / Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), 28029 Madrid, Spain); Dr CHIRLAQUE, María-Dolores (Department of Epidemiology, Regional Health Council, IMIB-Arrixaca, Murcia University, Murcia, Spain. / Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), 28029 Madrid, Spain); Dr GUEVARA, Marcela (Instituto de Salud Pública y Laboral de Navarra, 31003 Pamplona, Spain / Navarra Institute for Health Research (IdiSNA), 31008 Pamplona, Spain / Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), 28029 Madrid, Spain); Dr TIN TIN, Sandar (Cancer Epidemiology Unit, Oxford Population Health, University of Oxford, Oxford, UK); Dr WEIDERPASS, Elisabete (International Agency for Research on Cancer, World Health Organization, Lyon, France.); Dr DOSSUS, Laure (International Agency for Research on Cancer, World Health Organization, Lyon, France.); Dr FREISLING, Heinz (International Agency for Research on Cancer, World Health Organization, Lyon, France.); Dr AUNE, Dagfinn (Department of Epidemiology and Biostatistics, School of Public Health, Imperial College London, St. Mary's Campus, Norfolk Place, Paddington, London, UK / Department of Nutrition, Oslo New University College, Oslo, Norway / Department of Research, Cancer Registry of Norway, Norwegian Institute of Public Health, Oslo, Norway); Dr TSILIDIS, Konstantinos K (Department of Epidemiology and Biostatistics, School of Public Health, Imperial College London, St. Mary's Campus, Norfolk Place, Paddington, London, UK / Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Ioannina, Greece); Dr GUNTER, Marc (Department of Epidemiology and Biostatistics, School of Public Health, Imperial College London, St. Mary's Campus, Norfolk Place, Paddington, London, UK); Dr CROUS-BOU, Marta (Unit of Nutrition and Cancer, Cancer Epidemiology Research Program, Catalan Institute of Oncology-ICO, L'Hospitalet de Llobregat, Barcelona, Spain. / Nutrition and Cancer Group, Epidemiology, Public Health, Cancer Prevention and Palliative Care Program, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain. / Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA, 02115, USA); Dr AGUDO, Antonio (Unit of Nutrition and Cancer, Cancer Epidemiology Research Program, Catalan Institute of Oncology-ICO, L'Hospitalet de Llobregat, Barcelona, Spain. / Nutrition and Cancer Group, Epidemiology, Public Health, Cancer Prevention and Palliative Care Program, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain.)

Presenter: NADAL ZARAGOZA, Nuria (Unit of Nutrition and Cancer, Cancer Epidemiology Research Program, Catalan Institute of Oncology-ICO, L'Hospitalet de Llobregat, Barcelona, Spain /Nutrition and Cancer Group, Epidemiology, Public Health, Cancer Prevention and Palliative Care Program, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain/Deutsches Krebsforschungszentrum /Programa de doctorat d'Alimentació i Nutrició, Facultat de Farmàcia i Ciències de l'Alimentació, Universitat de Barcelona, Barcelona, Spain.)

Session Classification: Poster Session