



HAL
open science

Why and How Should We Improve Breast Cancer Management in Elderly Women?

Massimo Lodi, Andrea Lodi, Nathalie Reix, Catherine Tomasetto, Carole Mathelin

► **To cite this version:**

Massimo Lodi, Andrea Lodi, Nathalie Reix, Catherine Tomasetto, Carole Mathelin. Why and How Should We Improve Breast Cancer Management in Elderly Women?. *European Journal of Breast Health*, 2018, 14 (3), pp.132-133. 10.5152/ejbh.2018.02070 . hal-03663170

HAL Id: hal-03663170






<https://hal.science/hal-03663170v1>

Submitted on 9 Sep 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Why and How Should We Improve Breast Cancer Management in Elderly Women?

Massimo Lodi^{1,2} , Andrea Lodi³ , Nathalie Reix^{4,5} , Catherine Tomasetto² , Carole Mathelin^{1,2,6} 

¹Unit of Breast, Strasbourg University Hospital, Strasbourg, France

²Department of Functional Genomics and Cancer, Institute of Genetics and of Molecular and Cellular Biology, Illkirch, France

³European Directorate for the Quality of Medicines and Healthcare (EDQM), Council of Europe, Strasbourg, France

⁴Biochemistry and Molecular Biology Laboratory, Strasbourg University Hospital, Strasbourg, France

⁵ICube, Strasbourg University, Federation of Translational Medicine of Strasbourg, Strasbourg, France

⁶Sarrebourg General Hospital, Sarrebourg, France

Cite this article as: Lodi M, Lodi A, Reix N, Tomasetto C, Mathelin C. Why and How Should We Improve Breast Cancer Management in Elderly Women?. Eur J Breast Health 2018; 14: 132-133.

Breast cancer is the most common malignancy among women worldwide, particularly in developed countries. In 2017 in France, it represents 31.8% of newly diagnosed cancers and responsible for 18.2% of cancer mortality in women (1). While it is recognized that age is the first breast cancer risk factor – incidence grows with age – the over-mortality among elderly women due to breast cancer is underestimated. Indeed, the specific mortality associated with breast cancer increases with ageing (2). Moreover, Europe's population is getting older. It is estimated that, between now and 2050, its population over the age of 65 is set to increase from about 20% to about 30% (3). Within this context, it can be predicted that breast cancer, which right now is already a major public health concern, will grow in importance in the future and will be a serious concern for the forthcoming medical practice.

However, an analysis of the international scientific literature points to paradoxical data concerning the link between age and breast cancer evolution (4). On one hand, ageing appears to be associated with increased favorable biological and histological tumor characteristics. On the other hand, clinical practices indicate that elderly patients present a more advanced disease: tumors are larger in size, frequently affecting the lymph nodes and distant organs. How can this apparent contradiction be explained?

With age advancement general physiological modifications are observed, such as immune senescence – deteriorations in the immune system associated with ageing – which leads to decreased protection against cancer. Moreover, the body's tissues cumulate exposure to environmental carcinogens and the DNA reparation systems become less effective. In addition, some breast-specific modifications are also noted with ageing. While older age is associated with lower levels of circulating estrogens, in the elderly, breast epithelial cells become more sensitive to estrogens. Furthermore, with advancing age, the mammary gland becomes “fattier” – i.e. the breast tissue is progressively replaced by adipose and conjunctive tissues – leading to increased intra-mammary estrogen production. Such transformation of the breast facilitates clinical and radiological examination. In addition, as age advances, the breast cancer micro-environment changes, perhaps favoring the progression of less aggressive breast cancer cells. The biological mechanisms underlying this apparent paradox are to date the subject of fundamental and translational researches. However, society-related actions can be recommended.

Today, benefit from breast cancer screening is established in most European countries. In the European Union (EU), the upper age limit defining breast cancer screening eligibility varies among different countries, however it never exceeds 75 (except for Monaco which includes women until the age of 80). Hence, unlike in the United States, EU member states' breast cancer screening programs rarely include elderly women. Moreover, participation rates in such programs – be they national or at the individual level – are highly variable, sometimes insufficient and decline with advancing age. This leads to an adverse statement between the low coverage of breast cancer screening and the high incidence among elderly women. It seems that both health professionals and the general population are wronged by the upper age limit for the screening programs and believe that elderly women are at low risk, which is not the case.

The American Cancer Society guidelines recommend in the United States to continue screening as long as life expectancy is at least 10 years, without age limit (5).

In addition, in the EU, clinical breast monitoring in elderly women is underperformed. For example, only half of physicians perform routine breast clinical examination on elderly women (6). This omission may delay the diagnosis, entailing more advanced local lesions and more likely tumor extension to lymph node or metastasis.

Furthermore, it is commonly thought, even within the community of healthcare professionals, that in older patients “cancer progresses slowly” and “it does not kill”. Such lingering dogmas contribute to complicate the problem as they hurdle provision of the necessary medical care. These ill-conceived assertions are easily contradicted by documented scientific evidence. Notably, up until 85 years of age, the leading cause of mortality in elderly women with breast cancer is the cancer itself and not co-morbidity (2). In this respect, it can be affirmed that at least part of the medical community, of patients and of the society in general are either wrongly or not informed at all.

Epidemiological and societal studies indicate that in most European countries, breast cancer in elderly women is not always properly managed. Ideally, physiological age should be considered rather than chronological age.

We also suggest that information campaigns should be held for the public and training on breast clinical examination for physicians and caregivers in general be strengthened. Also, women over the upper age limit for screening programs should be encouraged to undergo individual screening, both clinical and mammographic. Indeed, when a breast cancer is diagnosed early in an elderly woman, its appropriated therapeutic management is usually associated with an excellent prognosis.

Author Contributions: Concept - M.L., C.M.; Supervision - C.T.; Literature Search - M.L., C.T., C.M.; Writing Manuscript - M.L., C.M.; Critical Review - A.L., N.R., C.T.

Acknowledgements: We are thankful to Camille Bilger, Ph.D. and Daisy Harwood for English proof-reading and corrections.

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

References

1. Jéhannin-Ligier K, Dantony E, Bossard N, Molinié F, Defossez G, Daubisse-Marliac L, Delafosse P, Remontet L, Uhry Z. Projection de l'incidence et de la mortalité par cancer en France métropolitaine en 2017. Rapport technique. Available from: <http://invs.santepubliquefrance.fr/Publications-et-outils/Rapports-et-syntheses/Maladies-chroniques-et-traumatismes/2018/Projection-de-l-incidence-et-de-la-mortalite-par-cancer-en-France-metropolitaine-en-2017>.
2. van de Water W, Markopoulos C, van de Velde CJ, Seynaeve C, Hasenburg A, Rea D, Putter H, Nortier JW, de Craen AJ, Hille ET, Bastiaannet E, Hadji P, Westendorp RG, Liefers GJ, Jones SE. Association between age at diagnosis and disease-specific mortality among postmenopausal women with hormone receptor-positive breast cancer. *JAMA* 2012; 307: 590-597. (PMID: 22318280) [[CrossRef](#)]
3. Eurostat (European Commission) statistical books. People in the EU: who are we and how do we live?. European Union 2015.
4. Lodi M, Scheer L, Reix N, Heitz D5, Carin AJ, Thiébaud N, Neuberger K, Tomasetto C, Mathelin C. Breast cancer in elderly women and altered clinico-pathological characteristics: a systematic review. *Breast Cancer Res Treat* 2017; 166: 657–668. (PMID: 28803352) [[CrossRef](#)]
5. Jin J. *Jama Patient Page*. Breast Cancer Screening Guidelines in the United States. *JAMA* 2015; 314: 1658. [[CrossRef](#)]
6. Larson KE, Cowher MS, O'Rourke C, Patel M, Pratt D. Do Primary Care Physician Perform Clinical Breast Exams Prior to Ordering a Mammogram? *Breast J* 2016; 22: 189-193. (PMID: 26687763) [[CrossRef](#)]