

# 4 February = World Cancer Day

1 OUT OF 3 MEN WITH BREAST CANCER DOES NOT RECEIVE ADEQUATE TREATMENT

Researchers confirm the poor quality of care for men affected by breast cancer  
and urge for a clinical trial

Brussels, 1 February 2018 – Recent findings from the International Male Breast Cancer Programme confirm that male and female breast cancers are undeniably different and that 1 out of 3 men affected by the disease is not treated optimally. They also highlight a breast cancer subtype that seems to occur only in men. Furthermore, with this programme, scientists have demonstrated the feasibility of pursuing a therapeutic clinical trial in a rare patient population that accounts for 1% of all breast cancers.

## Male and female breast cancers are different

The International Male Breast Cancer Programme is being conducted simultaneously in Europe, in the US and South America, and consists of three different parts. Results of the first part, a retrospective collection and analysis of clinical data and biological samples from 1822 male breast cancer cases between 1996 and 2010, were recently published in *Annals of Oncology*. They show that male and female breast cancers are definitely different in terms of histology and grading. The study also indicates that, while over 90% of male patients had oestrogen receptor-positive (ER+) breast cancer, only 77% of them received endocrine therapy after surgery, which would have been the adequate treatment<sup>1</sup>. This confirms that the quality of care of male patients is inferior to that of the opposite gender.

## A breast cancer subtype present only in men

Researchers also performed RNA sequencing on 152 tumour samples from the retrospective registry and analysed their relationship with patient outcome. They identified five intrinsic subtypes of male breast cancer with various gene expression profiles. Their findings, presented last December at the San Antonio Breast Cancer Symposium<sup>2</sup>, support the results reported by I. Johansson and colleagues in *Breast Cancer Research* in 2012<sup>3</sup>, suggesting that there is a breast cancer subtype occurring exclusively in men that needs to be characterised better.

“Men often suffer additional stress when they learn from their doctor that little is known about the disease and that they will be treated like their female counterparts,” says Dr Fatima Cardoso, co-Principal Investigator of the programme and Director of the Breast Unit at the Champalimaud Clinical Centre, Lisbon, Portugal. “This needs to change. Further research is urgently needed to better understand this rare disease and find adequate treatments for men.”

## A breast cancer clinical trial for men

In the second part of the International Male Breast Cancer Programme, researchers built a prospective registry of newly diagnosed patients for a period of 30 months, concluded in February 2017, collecting both clinical data and tumour samples. One of their main goals was to prove the feasibility of a therapeutic clinical trial that could generate meaningful results in a rare disease setting, which is a challenge due to the small number of available patients.

With over 550 male breast cancer patients recruited in only 30 months, including 75% in Europe, 20% in the US and 5% in other countries, the investigators showed that, through an international collaborative effort, they were able to set up a well-structured and functional research network ready to run a clinical trial in this rare population<sup>4</sup>.

Today, they are struggling to find a pharmaceutical partner willing to conduct a study and test different treatment approaches for men affected by the disease.

<sup>1</sup> Characterization of male breast cancer: Results of the EORTC 10085/TBCRC/BIG/NABCG International Male Breast Cancer Program. Cardoso F. et al., *Ann Oncol*. 2017 Oct 28. doi: 10.1093/annonc/mdx651.

<sup>2</sup> Molecular subtyping of male breast cancer by the International male breast cancer program (IMBC): EORTC 10085/TBCRC 0-29/BIG 2-07/NABCG/BOOG 2009-04. Martens JWM, et al. Poster Session, SABCS 2017.

<sup>3</sup> Gene expression profiling of primary male breast cancers reveals two unique subgroups and identifies N-acetyltransferase-1 (NAT1) as a novel prognostic biomarker. Johansson I. et al., *Breast Cancer Res*. 2012 Feb 14;14(1):R31.

<sup>4</sup> Clinical and biological characterization of male breast cancer (BC) EORTC 10085/TBCRC 029/BOOG 2013-02/BIG 2-07: Baseline results from the prospective registry. Giordano SH, et al. Poster Session, SABCS 2017.

## **Male breast cancer: a rare and inadequately managed disease**

Male breast cancer is a rare disease accounting for 1% of all breast cancers. Most cases are detected in men between the age of 60 and 70. They are mostly luminal breast cancer types and usually more advanced due to late diagnosis.

The American Cancer Society estimates that in the US about 2,550 new cases of invasive male breast cancer will be diagnosed in 2018 and about 480 men will die from the disease<sup>5</sup>

Breast cancer is about 100 times less common among men than among women. Because of the rarity of the disease, men are usually excluded from clinical trials, and doctors often extrapolate treatment from studies applied to women.

## **Study partners**

The International Male Breast Cancer Programme emerged in 2006, is coordinated by European Organisation for Research and Treatment of Cancer (EORTC) and run under the umbrella of the Breast International Group (BIG) and its US counterpart the North American Breast Cancer Group (NABCG), joining efforts to better understand the biology and evolution of male breast cancer with the hope to improve treatments of patients affected by this rare disease in the future.

The programme is coordinated and sponsored outside of the US by the EORTC under the BIG umbrella, and conducted in collaboration with the US Translational Breast Cancer Research Group Consortium (TBCRC), serving as US sponsor.

Seven other research groups that are members of the BIG network are involved in this international collaboration: the Borstkanker Onderzoek Groep (BOOG), the Hellenic Cooperative Oncology Group (HeCOG), the Hellenic Oncology Research Group (HORG), Cancer Trials Ireland, the Latin American Cooperative Oncology Group (LACOG), the Swedish Association of Breast Oncologists (SABO), and the Swiss Group for Clinical Cancer Research (SAKK).

This purely academic programme is funded by numerous grants, mainly from the Breast Cancer Research Foundation® (BCRF) but also including support from the EORTC Breast Cancer Group, the Dutch Pink Ribbon, the European Breast Cancer Council (EBCCouncil), the Swedish Breast Cancer Association and Susan G. Komen®.

Dr Cardoso will present updates about the Male Breast Cancer Programme at the coming 11th European Breast Cancer Conference (21 – 23 March 2018, Barcelona, Spain).

## **About EORTC (European Organisation for Research and Treatment of Cancer)**

The European Organisation for Research and Treatment of Cancer (EORTC) brings together European cancer clinical research experts from all disciplines for trans-national collaboration. Both multinational and multidisciplinary, the EORTC Network comprises more than 4,000 collaborators from all disciplines involved in cancer treatment and research in more than 800 hospitals and institutions in over 35 countries.

Through translational and clinical research, the EORTC offers an integrated approach to drug development, drug evaluation programmes and medical practices. EORTC Headquarters, a unique pan European clinical research infrastructure, is based in Brussels, Belgium, from where its various activities are coordinated and run.

For more information, visit [www.eortc.org](http://www.eortc.org).

## **About BIG (Breast International Group)**

The Breast International Group (BIG) is an international not-for-profit organisation for academic breast cancer research groups from around the world, based in Brussels, Belgium. Global collaboration is crucial to make significant advances in breast cancer research, reduce unnecessary duplication of effort, share data, contribute to the faster development of better treatments, and increase the likelihood of cures for patients. Therefore, BIG facilitates breast cancer research at international level, by stimulating cooperation between its members and other academic networks, and collaborating with, but working independently from, the pharmaceutical industry.

Founded by leading European opinion leaders in 1999, BIG now constitutes a network of 59 collaborative groups from Europe, Canada, Latin America, Asia and Australasia. These entities are tied to several thousand specialised hospitals and research centres worldwide. More than 30 clinical trials are run or are under development under the BIG umbrella at any one time. BIG also works closely with the US National Cancer Institute (NCI) and the North American Breast Cancer Groups (NABCG), so that together they act as a strong integrating force in the breast cancer research arena.

For more information, visit [www.BIGagainstbreastcancer.org](http://www.BIGagainstbreastcancer.org)

## **Note to Editors (not for publication)**

For further information on this media release and/or for interview requests, please contact:

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