

Press release – For immediate release

The administration of an anti-inflammatory drug during the ablation of the primary tumour reduces the risk of breast cancer recurrence in overweight or obese patients

3 of May 2018 – **Christine Desmedt, researcher at the Jules Bordet Institute, on collaboration with the VUB, the UCL and Elia Biganzoli at Istituto Nazionale dei Tumori and University of Milan, published on 30 April in "The Journal of the National Cancer Institute" a study that suggests benefits of the inter-operative administration of an anti-inflammatory drug, ketorolac, during the ablation of a primary breast cancer tumour in overweight or obese patients. Results that are promising for research and for breast cancer patients.**

Reduction in cancer recurrences thanks to ketorolac

The surgical ablation of the primary tumour is an essential component of breast cancer treatment. Nevertheless, the fact of removing the primary tumour could trigger mechanisms that activate cancer cells already dispersed in the body before the operation. In effect, it has been shown that this induces physiological changes that include inflammatory reactions. It is the cancer dormancy issue from the original studies of Romano Demicheli in cooperation with Elia Biganzoli, sharing with Christine Desmedt the first and last authorship of this new study, respectively.

It has, moreover, already been shown that the fact of having a high BMI (body mass index) also increases inflammation. Obesity has become a problem worldwide in recent decades. The latest estimates are that 50% of Belgian women are overweight or obese. Researchers at the Jules Bordet Institute, the VUB, the UCL and the Istituto Nazionale dei Tumori and University of Milan thus wanted to know if the injection of an anti-inflammatory drug during excisional surgery on breast cancers could reduce the development of metastases after the operation, according to BMI, extending previous results with Patrice Forget of VUB. They tested two different anti-inflammatory drugs (ketorolac and diclofenac) and the results show that the inter-operative administration of ketorolac is associated with a reduction in early recurrence in patients with a high BMI.

A promising study

This study shows a potentially important repositioning of ketorolac in the inter-operative treatment of patients suffering from breast cancer with a high BMI. It also has the potential of being as effective as and less costly than adjuvant systemic anti-cancer therapies. As such it could signify major progress for our regions as well as for the poorest or least advanced countries in the field of breast cancer treatment. The aim is to validate these results in the context of a prospective clinical trial.

Study references: “Potential benefit of intra-operative administration of ketorolac on breast cancer disease recurrence according to the patient’s body mass index”, published on 30 April 2017 in the scientific journal “Journal of the National Cancer Institute”.

Study financing: The Friends of the Bordet Institute and the Italian Association for Cancer Research (AIRC).

Attached:

Photo of Christine Desmedt, PhD, bio-engineer and researcher at the Laboratory for Translational Research into Breast Cancer at the Jules Bordet Institute, headed by Prof Christos Sotiriou, MD, PhD, Senior Research Fellow at the FNRS, Director of the BCTL. The BCTL is part of the U-CRC (ULB Cancer Research Center) .

Photo of Elia Biganzoli, PhD, biostatistician professor of medical statistics at the University of Milan and senior biostatistician of the unit of medical statistics, biometry and bioinformatics of Fondazione IRCCS Istituto Nazionale dei Tumori.

Press Contacts

Institut Jules Bordet

Ariane van de Werve

GSM : +32.48617 33 26

E-mail : ariane.vandewerve@bordet.be

www.bordet.be

About the Jules Bordet Institute

An integrated multidisciplinary centre, unique in Belgium, the Jules Bordet Institute is an autonomous hospital devoted exclusively to cancer.

For more than 75 years, the Jules Bordet Institute has been providing its patients with diagnostic and therapeutic strategies at the forefront of progress to prevent, detect and actively combat cancer. The Institute pursues three missions: care, research and teaching. Its international reputation attracts the world's leading cancer experts. Its spirit of innovation has enabled it to participate in the development and discovery of major new methods of diagnosis and treatment with the aim of bringing the findings to the patient as rapidly as possible.

In May 2013, the Jules Bordet Institute received official accreditation and designation from the OECI (Organisation of European Cancer Institutes) as a "Comprehensive Cancer Centre", a quality label reserved for multidisciplinary cancer care institutions whose activities include research and teaching. This is a first for Belgium.

The Jules Bordet Institute is a member of the Iris and Université Libre de Bruxelles hospital networks. With its 160 beds dedicated exclusively to cancer patients, every year the Institute treats more than 6,000 in-patients, 12,000 out-patients and provides 75,000 consultations. To effectively meet future demographic and scientific developments, the Institute is planning to build a new Institut Bordet on the ULB university campus in Anderlecht, next to the Erasmus Hospital. Inauguration is planned for 2018.

- Jules Bordet Institute website: www.bordet.be
- To view the Jules Bordet Institute presentation video, go to:
<http://www.bordet.be/fr/presentation/organigr/textes/bordet.htm>

Rue Héger-Bordetstraat 1, B-1000 Bruxelles/Brussel

T + 32 (0)2 541 31 11, F + 32 (0)2 541 35 06, BELFIUS: BE72 0910 0972 7816, www.bordet.be

Institut Jules Bordet, Association Hospitalière de Bruxelles régie par la loi du 8 juillet 1976
Jules Bordet Instituut, Ziekenhuisvereniging van Brussel onderworpen aan de wet van 8 juli 1976



About the Friends of the Bordet Institute

The Friends of the Jules Bordet Institute is a non-profit-making organisation with the sole aim of supporting and financing research at the Jules Bordet Institute, a cancer centre that is a reference in Belgium and abroad. As the largest private donor to the Bordet Institute, "The Friends" have donated almost 12 million euros in the past five years.

Considerable progress has been made in the field of oncology in recent years. Our understanding of the biological origin of cancer is growing all the time. Whereas 10 years ago we spoke of the microscopic analysis of tumours, today we speak of genetic profile, of sequencing, etc. Dozens of new molecules and markers have been developed, permitting the advent of personalised treatment. This progress has to a large extent been made possible through the extraordinary technological progress of recent years. But these new techniques that now enable us to probe the infinitesimally small are increasingly expensive.

For more than 40 years, the help of the "Friends" has enabled the Jules Bordet Institute to pursue its research using the most advanced technologies, thereby providing patients with the most innovative screening and treatment techniques. Techniques that generate life and hope.

By helping and supporting "The Friends of the Bordet Institute" you are participating in the many research programmes that they support and that all pursue a single aim: victory for life.

To find out more about the association The Friends of the Jules Bordet Institute, go to the website www.amis-bordet.be

To find out more about the "101 tables pour la vie", go to the website www.101tables.com

About UZ Brussel

UZ Brussel (University Hospital Brussels) has a staff of approximately 3,800 employees. It is attached to the Faculty of Medicine and Pharmacy of the Free University of Brussels on the Brussels Health Campus in Jette. With 721 hospital beds, it accounts for more than 30,000 admissions of patients each year from Belgium and abroad, more than 360,000 consultations (emergencies not included) and more than 70,000 patients at the emergency care. Its philosophy is founded on three principles: Dutch-speaking, pluralist and social. As a university hospital, it also has a teaching mission and conducts scientific research. More information can be found at www.uzbrussel.be.

About University of Milan

The University of Milan is a research-intensive university, with high quality teaching at all levels (undergraduate and post-graduate) in a broad spectrum of fields. Over the years, it has succeeded in maintaining a skilful blend of tradition and innovation, adjusting to the requirements of a fast-growing society without sacrificing the distinctive traits of a cultural education at university level.

The University of Milan is the top Italian university in most international rankings and is the only university in Italy included among the 22 prestigious universities that established the LERU, the League of European Research Universities.

The University of Milan is characterized by a large variety of disciplinary fields. The University's interdisciplinary vocation and, in particular, the methodological and cultural connections between various different fields of constantly developing knowledge generate a highly stimulating environment for studying and working.

About INT Milan

IRCCS Foundation – National Cancer Institute of Milan (INT) is a scientific public Institute for treatment and research. Founded in 1928, INT is the first in Italy among oncology IRCCS and it is a national and international reference centre for both more frequent, rare and pediatric tumors. With **540 employers and 27 laboratories**, today it is centre of excellence for pre-clinical, translational and clinical research, cure and epidemiological activities. INT has been designated as **Comprehensive Cancer Centre** by the Organisation of European Cancer Institutes (OECI), with **16 patents and 5 Institutional Pathology Registers**, it is affiliated to over a dozen of international organizations for cancer research and treatment (OECI, UICC, WIN, EORTC) and it is member of the «Cancer Core Europe» network made by the 7 major **European Cancer Centres**. In 2016 INT portfolio: **640 clinical studies, 693 studies published** on international scientific journals, 258 projects funded by public and private Corporation. INT is one of the Centres of reference for clinical assistance in Lombardy and at National level: in 2017 more than **18,000 patients were hospitalized** and over one million and 147 thousand visits and exams were realized. In addition to research and clinical activities, the Institute is involved in education programs, hosting **139 university specialization students**.

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