Prof. Ian O. Ellis: new progress on breast cancer from pathology and molecular genetics

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Hosted by China Anti-Cancer Association Breast Cancer Society, Fudan University Shanghai Cancer Center, and Shanghai Anticancer Association, the 12th Shanghai International Breast Cancer Symposium was successfully held in Shanghai during October 19 to October 21, 2017. As the most diversified annual event rich in content, this symposium almost covers all progresses in basic researches, clinical treatments, and preventions as well as reconstructions related to breast cancer. Altogether, more than 3,000 experts from home and abroad attended the grand meeting this year.

Prof. Ian O. Ellis, an authoritative pathologist from University of Nottingham in United Kingdom, has been involved in the practice of pathology for over 30 years and has an international reputation in clinical and translational research in breast disease. During the conference, Prof. Ellis has delivered a wonderful speech *(Figure 1)* on "*Progress on Breast Cancer from Pathological Study*", primarily giving his overviews on breast cancer research from pathology perspective. On the sidelines of conference, the editor of *Annals of Breast Surgery* is very honored to interview Prof. Ellis and invites him to share some latest research progress on breast cancer from perspectives of pathology and molecular genetics *(Figure 2)*.

Prof. Ellis indicated that pathology in breast cancer changed significantly in the past ten years. He introduced that pathology describes breast cancer and then gives information about proteins and DNA, RNA changes, so the information of pathology can convey to oncologist's surgery much greater as well as convey to the patients. It is very useful not only in terms of how this disease will behave but also which treatment is appropriate. Prognostic information can tell the risks of the disease or whether the patients will have an aggressive breast cancer. Currently, the main focus of pathology is to identify whether the cancer cells will respond to drug and chemotherapy treatment.

According to the introduction of Prof. Ellis, a very comprehensive genetic information can be found out from the samples of breast cancer patients. Cancers are fundamentally genetic alterations related to DNA repair, since cancer can induce mistakes in this DNA repair and will produce genetic alterations. The biggest challenge in next five to ten years is to identify what are the core changes that drive the cancer and make a profound research on the next-generation sequencing data so that new breakthroughs can be made to further benefit the patients.

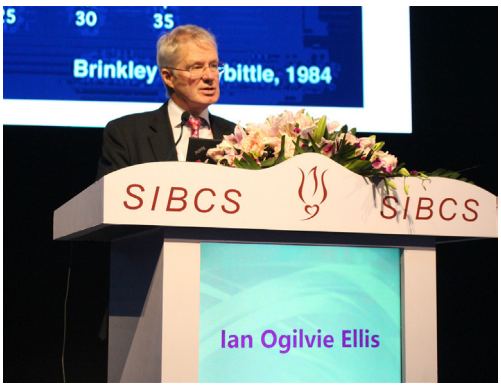

Figure 1 Speech delivery of Prof. Ellis.

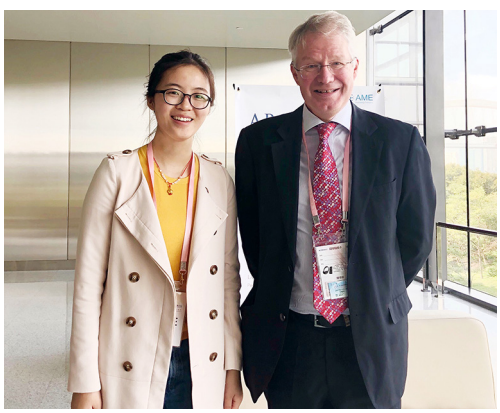

Figure 2 Photo with Prof. Ellis.

Figure 3 Prof. Ian O. Ellis: new progress on breast cancer from pathology and molecular genetics (1).
Available online: http://www.asvide.com/articles/1905

At present, Prof. Ellis collaborates with various experts around the world in his research group with a number of different research projects carrying out. Prof. Ellis now focuses on classification of breast cancer and using whatever available techniques and tools to describe the disease. As for breast cancer prevention, Prof. Ellis said that in this moment, the priority is trying to understand the evolution of breast cancer from the starting point, such as how did it start, how is it related to, how did it develop from some forms of benign disease and then we can look for more effective prevention measures *(Figure 3)*.

Interview questions

(I) Could you please introduce the progress on pathological study of breast cancer over the past decade?
(II) Could you share with us your findings on breast cancer from the perspective of molecular genetics?
(III) What sorts of ongoing academic projects are you involving now?
(IV) What is the current status of patients' reconstruction after breast cancer in UK?
(V) Would you please kindly provide some suggestions on breast cancer prevention for women?

Experts introduction

Prof. Ian O. Ellis, MD (Cancer Pathology, Faculty of Medicine & Health Sciences, University of Nottingham, Nottingham, UK).

Professor Ellis has been involved in the practice of pathology for over 30 years and has an international reputation in clinical and translational research in breast disease, particularly classification of breast cancer and evaluation of prognostic factors. Prof. Ian O. Ellis is the Honorary Consultant Pathologist in Nottingham City Hospital as well as experienced lecturer being a founder member of the faculty of the Nottingham International Breast Education Centre. Besides, he is the Author of over 600 peer reviewed scientific publications, chapters in medical textbooks and specialist textbooks in pathology, a Fellow and a past Specialty Advisor of The Royal College of Pathologists, past President of the Pathological Society of Great Britain and Ireland, past Chairman of the UK National Coordinating Committee for Breast Pathology, past President of the International Society of Breast Pathology, past Councilor of The European Society of Mastology, Steering Committee Member of The European Group for Breast Screening Pathology and past Chairman of the Breast Pathology Working Group of the European Society of Pathology. He has acted as an advisor to the DoH, UICC, WHO and IARC as well as the founder of PathLore and Medical Director of Source Bioscience.

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Footnote

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Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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(Interview editor: Luna Young, ABS, abs@amegroups.com)