

Dr. Rachel Hargest: challenges and future developments on gastric cancer research

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Dr. Rachel Hargest (*Figure 1*) qualified at Charing Cross & Westminster Medical School and undertook junior surgical posts around London. Her first registrar post was in Johannesburg and was the defining post of her training. A Cancer Research Campaign Clinical Research Fellowship followed leading to award of an MD, a gene therapy research interest, and higher surgical training in North Thames Region and Toronto.

In 2000 she returned to Wales as consultant surgeon in Abergavenny and moved to University Hospital of Wales in 2007. She runs a busy colorectal surgery practice with specialist interests in Intestinal Failure, Familial Cancers and Anal Cancer. She also sits on the All Wales Surgical Training Committee, and is academic representative on the Executive Board of the Welsh School of Surgery and the Welsh Board of the Royal College of Surgeons.

She is an active member of the Royal Society of Medicine (RSM)—Council member for Section of Surgery and the newly formed Section of Gastroenterology. She was elected to the RSM council in 2011 and is Treasurer Elect of the RSM for 2014–18. She also sits on the National Executive committee of the British Association of Surgical Oncology, the Management Board of the NICE—National Collaborating Centre for Cancer, and is an active member of the British Society of Gastroenterology and the British Society of Gene and Stem Cell Therapy.

TGC: *Your speech topic is about the gastric cancer in Wales. Could you give us a brief introduction about it?*

Dr. Hargest: Gastric Cancer in Wales, like many other parts of the UK, is a fairly common cancer, and the problem for us is that the outcomes have traditionally been poor. So a diagnosis of gastric cancer for a person in Wales or in the UK was usually associated with high risk of death from that cancer because the results of treatment tend to be poor. This is mainly because the presentation was such a late stage, and the patients who get gastric cancer tend to have quite a lot of comorbidities as well. This is very different



Figure 1 Dr. Rachel Hargest.

from the reports from places like Japan, where cancers tend to be found at a much earlier stage and undergo more effective treatment.

TGC: *It is well-known that gastric cancer is a big problem in Asia. You have mentioned some situation in Japan. So what are your comments on the gastric cancer research in Japan or China?*

Dr. Hargest: Traditionally, if you go back about 20 years ago, most of the reports came from Japan really because of their early diagnosis program. But in more recent years, there have been a lot more reports from China in the literatures. It is really because gastric cancer in China is such a common problem. With such a huge population, it's probably one of the highest cancer incidences, along with lung cancer. Also I think with the development of medical care in China, and the amazing hospitals and science facilities that you now have in big centers like Beijing and Shanghai, we can learn a lot from the Chinese literature on the treatment and also research into gastric cancer for the future.

TGC: *You just mentioned that many reports and literatures come out from China. So what are the difficulties that we should overcome in the research? What do you think is the major challenge?*

Dr. Hargest: I think the major difficulty is to find a very reliable early diagnostic test that doesn't involve having to do endoscopy for the whole population. A fairly small country like Japan has been able to offer almost population screening. But in China, that would not be possible because it's a big country with such a huge population and access to medical care in some areas will be difficult. What you really want to know is at the genetic level, whether there could be some kind of blood or saliva test for early diagnosis, or at least for assessing people who are at risk of getting gastric cancer then targeting your endoscopies to those people. That would be the ideal solution for the future, but I think it's quite a long way off.

TGC: *We know that you are interested in colorectal cancer surgery practice, such as the intestinal failure, familial cancers and anal cancer. What's your idea about this?*

Dr. Hargest: In the UK, most surgeons specialize in either colorectal work or upper gastrointestinal work, which includes esophagus, stomach, pancreas and liver. So I tend to do more of the colorectal work. And we also have another difference to China, which is that in the UK, very few surgeons do only cancer work. If you are a colorectal surgeon, you have to do malignant work for colorectal cancer, but also benign colorectal work for inflammatory bowel disease, intestinal failure, polyps and so on. And I think that's certainly quite different to the big hospitals in Beijing where some of the surgeons specialize only in cancer and don't do any other surgery.

TGC: *You also have special interest in gene therapy and you are an expert in GI cancers. So what can we expect in the future development about gene therapy in GI cancers?*

Dr. Hargest: Gene therapy was thought, maybe 10 or 15 years ago, to be the great hope for the next sort of stage of treating diseases including cancer. But it hasn't proven to be the big success we were hoping, and I think it's mainly because it was underestimated how difficult it would be to deal with getting sufficient genes transferred into sufficient cells to make a clinical difference. I think colorectal cancer is quite a good model for some gene therapy approaches in

that you've got the adenoma to carcinoma sequence with the fairly well-described genetic changes through about five or six different genes, such as APC, k-Ras, DCC and so on. And the ability maybe to intervene at the stage of patients with polyps, in order to prevent progression of polyps to cancer, is maybe a small area where gene therapy may be useful. The other way in which gene therapy has been proved useful, not too much in colorectal cancer, but in things like breast cancer and some of leukemia and lymphomas, is by trying to overcome multidrug resistance. So the cancers which have become genetically resistant to chemotherapy can be modified so that they are sensitive to chemotherapy.

TGC: *We have noticed that you are an active member in many associations, such as the Royal Society of Medicine (RSM). From these experiences, what would you like to say to the doctors in this field in China?*

Dr. Hargest: I think the thing that I've learnt is that medicine is a process of learning throughout your career. You don't stop learning when you're qualified as a doctor or a surgeon. And in Britain, societies like the Royal Society of Medicine are very good at providing education on a continuing basis for doctors after they qualify, really to bring us up to date with new techniques, to share good practice between different hospitals, and also really to make sure we don't get stuck at the level where we qualify and then fail to progress because there is always something new to learn. I think coming to conferences like this and seeing how things are done in other countries is useful. There is a lot we can learn from China and the rest of Asia.

TGC: *Thank you very much!*

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