

## Ask the Expert live chat with Dr Jo Morris

Posted on Friday 8th February 2013

On Friday 8 February, [Dr Jo Morris \(/staff/profiles/cancer/morris-joanna.aspx\)](#), Senior Lecturer in the School of Cancer Sciences took part in a live chat answering your questions about her breast cancer research. If you missed it, here is the full transcript from the event, including the questions Jo ran out of time to answer. The full storify recap can also be [viewed here \(http://storify.com/birminghamalum/ask-the-expert-jo-morris\)](#).

**Q: What attracted you to becoming a researcher?**

A: *I've always liked trying to understand how things work and being a researcher is the same. My job is to work out how a cell works and what goes wrong with it when it becomes cancer.*

**Q: How much of what you learn in your research can be applied to other types of cancer?**

A: *The principles are applicable to all cancers. Some of what we learn are most applicable to breast and ovarian cancer.*

**Q: What has been the biggest breakthrough in breast cancer research in the last 10 years?**

A: *Most exciting for me has been understanding that we can use the signature of a cancer to target it.*

**Q: Do you feel like you're in competition with other researchers?**

A: *Sometimes. The scientific community shares reagents and knowledge but there is competition to be the first to find something. If a topic is important it is likely that more than one person will be looking into it.*

**Q: What inspired you to specialise in breast cancer research?**

A: *It's a problem so big that I felt any improvement would make a difference.*

**Q: Is there anything people can do to lower their chances of cancer?**

A: *The evidence really is to stop smoking, get plenty of fresh fruit and veg, and plenty of exercise.*

**Q: I've read that using deodorants has been linked to the development of breast cancer is there any evidence for this?**

A: *There has been research in this area. Looking at the data one would have to say no –the balance is no risk. This article from [@BCCampaign](#) (<http://twitter.com/BCCampaign>) has more information on this: [bit.ly/UT2heR](http://bit.ly/UT2heR) (<http://bit.ly/UT2heR>)*

**Q: Are we getting better at early identification and treatment of breast cancer?**

A: *In short, yes mammography has improved early detection and the combination of Tamoxifen and aromatase inhibitors, Herceptin and better surgery have improved treatment.*

**Q: Has the discovery of BRCA1 mutations in breast cancer increased detection and survival?**

A: *Yes monitoring of patients with BRCA1 changes, and elective surgery (mastectomy) has saved lives.*

**Q: How important is the funding from Breast Cancer Campaign for your work?**

A: *Funding from Breast Cancer Campaign has been vital. In the case of the Circles of influence project, it was BCC money that got us started.*

**Q: What has been the highlight of your research career so far?**

A: *Seeing PhD students thrive and go on to great new jobs is very rewarding.*

**Q: How do your research outcomes get shared?**

A: *Mostly in research journals (magazines for scientists), as well as talks, seminars and news stories.*

**Q: How common is breast cancer in men?**

A: *Less than 1% of all breast cancers occur in men (to put another way, 100 times less common). That translates to 400 men a year are diagnosed in the UK, with 80 that die every year.*

**Q: Has your campaign to raise money for a new incubator been a success?**

A: *Yes, we have bought it and it's on its way - thank you to everyone for their support.*

**Q: Will we ever live in a world without cancer?**

A: *Unlikely. Cancer is a cell of your own body turned bad, dividing when it shouldn't. Cancer is a byproduct of having bodies with many cells in it. But –that isn't to say that we might live with it rather than die of it. Like grey hair.*

**Q: What advice would you give PhD students and early researchers at the start of their career?**

A: *It's hard work, but there are great moments knowing you've found something that's going to matter.*

**Q: Should dairy products be avoided by those at risk/recovering?**

A: *A recent large scale study found no association between dairy consumption and increased risk of breast cancer.*

**Q: Why do you think breast cancer is so prevalent in the Western World when rates are lower in the Far East?**

A: *This is an active area of research. People who move from east to west gain the cancer risk of westerners. Why? Diet, exercise, something else? The jury is still out. In one large study a low-fat diet was found to reduce relapse in patients - in another it didn't, although in the first study, the patients lost weight.*

**Q: Why should people give money to your research?**

A: *We're making a new research tool for understanding and monitoring breast cancer, we need your help – it wouldn't be able to happen without funding.*

**Q: Is a glass of wine ever a good thing?**

A: *There is an anti-oxidant in red wine, resveratrol, but unfortunately I rather think the good effects are negated by the alcohol. I'll put in more research this evening (in moderation).*

### Additional questions

**Q: What is the thing you most enjoy about your job?**

A: *Getting a result – these days it's my students and post-docs who have the fun of knowing something new that no-one else knows. The best moment is when they run around the lab with something new and exciting.*

**Q: Is there such a thing as an average day, and what does that look like?**

A: No such thing as average. The only structure I have is Wednesday afternoons when I see everyone here getting on. At the moment this week has involved working on a report of some new findings, a review for the Breast Cancer Campaign and a little bit of microscope work.

**Q: What drives you to continue when you come across very upsetting/challenging situations or stories?**

A: The hope that some of the evidence we're collecting will tell some women and their families that genetic change they have means their risk is no worse than the normal population, or that the new cells we're making will be the basis for screening drugs that will be less toxic and more effective. These are small things though sometimes in the face of real tragedy.

**Q: What single piece of research/work are you most proud of and why? And what contribution has it made?**

A: We found that that the breast and ovarian cancer predisposition protein is 'switched on' by another protein – called SUMO. It opened a whole new area that other researchers, not just us are looking into. It was only discovered a few years ago, so the contribution to treatment may take a while.

**Q: What is the next thing you would like to accomplish?**

A: The project we're doing now is pretty exciting – we are generating cells in the lab that copy the underlying genetics of breast cancer. By following how these cells develop we hope to identify markers of progression that will be useful for early diagnosis and treatment choice.

**Q: Is it true that some people are genetically predisposed to develop cancer even if they follow a healthy lifestyle?**

A: Sadly some people are yes. The vast majority of people are not in this category of having high risk genetic changes – and for most of us a healthy life style will make a difference to our risk.

**Q: Will cancer ever actually be cured? Or will researchers always be trying to improve detection and treatment?**

A: It depends what you mean by cured. If you mean totally eradicated then no, if you mean beaten back to a level where it doesn't cut lives short – then yes I very much believe so.

**Q: Will your research have an effect on the understanding of other cancers? If so, which ones?**

A: The most direct impact, after breast cancer, is on ovarian cancer. It turns out that the genetics is very similar for high risk ovarian cancer. There are also implications for prostate and pancreatic cancers. Some of our work we think may be most relevant to lung cancer but we don't yet know.

**Q: One day, will we be able to determine our 'risk ratio' with a simple blood test?**

A: Perhaps. In recent years scientists have looked for common genetic changes that give just a small risk of breast cancer. The thought is that if a person has a large number of these small risk genes we might be able to say who was a risk and who wasn't. With the cost of genome sequencing coming down it isn't the ability to do the sequencing that is the problem, but the ability to understand what it all means that we don't yet know. That's what projects like ours are trying to achieve.

**Q: What might be the next breakthrough in breast cancer research?**

A: We're slowly moving into a time where your cancer can be examined and treated, specifically. Every cancer is different – we're moving towards an era when personalised medicine might be realistic – but there's still a very long way to go.

**Q: How do you know if you're at increased risk of breast cancer?**

A: It is related to your family history. In particular how many first degree relatives you have you have had breast or ovarian cancer. If you are worried about it, talk it over with your GP. But remember that breast cancer is common (1 in 8 women) so even with a family history you may not have the gene(s) that confer high risk. And even without a family history because the incidence is so high you are not guaranteed not to get it.

See **Myth number 4** (<http://www.breastcancercampaign.org/articles/top-four-myths-about-breast-cancer-part-of-world-cancer-day>) for more.

**Q: Do you hope your research will prevent women from undergoing preventive mastectomies after finding the cancer gene?**

A: That's a difficult question with several parts. We work on one of the genes that when changed confers a very high risk of breast and ovarian cancer. Some of the changes in it we understand, some we don't yet. The work we are doing may find that some changes in the gene are not so dangerous. In which case women carrying that change may choose not to undergo mastectomy (as they are not at a particularly high risk). In which case yes we may reduce the need many women feel to have a preventative surgery because they 'have the gene'.

Meanwhile there are the changes that are dangerous. At the moment many women choose to have a preventative mastectomy when they find this out. And at the moment this saves lives.

The future I'd like to see is that we get so much better at understanding the changes that a cell goes through between being a normal cell with a small gene change to being a tumour that we'll be able to monitor patients and catch any cancers before they become life threatening. This way a mastectomy wouldn't be needed.

**Q: What do you think we'll be saying about breast cancer research in 10 year's time?**

A: That the last ten years were an important time in cancer research, a model for understanding cancer as a whole. Breast cancer is in reality many different types of disease. I'd like to think that some of the types of breast cancer common today will have been made live-able with and survival with cancer will be the norm.

**Q: Are there any lifestyle changes that can reduce the chances of getting breast cancer?**

A: Yes some we can do something about – reducing smoking keeping within a healthy BMI. Alcohol seems to increase the risk. Some lifestyle issues are harder - like number of children. Having more children is associated with reduced risk of disease. While the contraceptive pill slightly protects against ovarian cancer, and HRT slightly raises the risk of breast cancer.

**Q: Why do relatively few men get breast cancer?**

A: Although men have breast tissue there is a lot less of it – so there are fewer cells from which a cancer can derive. That said we know less about male breast cancer and need more research in this area.

**Q: Does your research apply to men as well?**

A: Yes – men with gene changes are at risk from breast and other cancers that our work relates to. No research stands alone; breast cancer research for example has gleaned a lot from how leukaemia is understood.

**Q: How much integration is there between the University of Birmingham and the major UK/worldwide charities and other universities?**

A: Lots! This is Ask the Expert – but to be honest I spend a lot of time on the phone to experts at other Universities, I just got a package from a professor in Oslo and another from Boston who are helping us by providing knowledge and reagents. Science is a very social enterprise!

For more information about Jo's research, please [click here \(/staff/profiles/cancer/morris-joanna.aspx\)](#) and to support Jo's research, please [click here \(/alumni/giving/Breast-cancer.aspx\)](#).

