



Testing and Early Diagnosis

Is My Lung Cancer Mutation Genetic?

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I talked a little about mutations and I want to clarify what does that mean. So, when we say that a tumour has a mutation, a lot of family members of patients are worried: "Is this something I got from my parents and is this something I'm going to transfer to my children?". So, to clarify that, most mutations that we talk about in lung cancer are somatic mutations and not germlines mutations. So what does that mean? Somatic mutations are mutations that happen in our body because of years of different kinds of exposures, there are different what we call 'hits' — things that happen after birth that are causing certain changes in your cells and lead to the formations of cancers. So what this means is that this is not a mutation you were born with, and that it is not a mutation you are going to pass onto your children. So, if you have cancer with somatic mutations, most of the mutations we see that have treatment options are somatic mutations. So, do not be worried about whether or not you are passing that onto someone else in your family. Germline mutations are important to know as well. While they are not as prevalent in lung cancer, we're finding more and more that there might be some mutations that you might be born with; something that you were passed down and you will be passing down. Those are mutations that essentially you had it, it's present in every cell in your body; it is inherited and you could potentially pass it on to your children. And if we do find evidence of germline mutations, we often ask our patients to go in for genetic counselling and to see what other further testing they need to undergo. But, in lung cancer, most of the mutations that the doctors talk about is somatic mutations, but if you are worried it is always helpful to bring that up as a question to make sure you don't need genetic counselling.