

Piggy-backing cells hold clue to skin cancer growth (w/ Video)

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Skin Cancer cells work together to spread further and faster, according to a new study published in Cell Reports. The discovery could lead to new drugs to tackle melanoma, the most deadly form of skin cancer.

Cancer Research UK scientists at The University of Manchester found that some melanoma cells are particularly fast growing, but not very good at invading the surrounding tissue, while other [melanoma cells](#) are the opposite – highly invasive but slow-growing.

In a tumour, the faster growing cells 'piggy-back' along with the more invasive cells, so together they can be more effective in establishing a new tumour once they have reached different parts of the body.

The scientists conducted the research using see-through zebra fish so that they could see how the cancer cells moved and expanded from the original tumour.

Dr Claudia Wellbrock, study author and Cancer Research UK scientist at The University of Manchester and a member of the Manchester Cancer Research Centre, said: "We used to think that cancer cells spread by first specialising in invading other parts of the body and then change in order to grow rapidly. But this research shows that melanoma can spread by 'co-operative invasion'.

"Different types of [cancer cells](#) with different strengths and weaknesses are both present in the tumour at the same time and can work together to

spread faster and more efficiently. This has profound implications for how we find cures for this terrible disease."

Melanoma is the most dangerous form of [skin cancer](#) with around 13,300 people diagnosed in the UK each year.

Worryingly, the incidence rates of [malignant melanoma](#) have increased more than fivefold since the mid 1970s.

Professor Richard Marais, director of the Cancer Research UK Manchester Institute, said: "Malignant melanoma is the most deadly form of skin cancer precisely because it spreads quickly and aggressively. This kind of research is vital for establishing how this horrible disease spreads around the body and how we might be able to stop it.

"As well as finding more effective treatments for advanced [melanoma](#), we also need to stress the importance of early diagnosis, detecting tumours before they have a chance to spread."

More information: Chapman, A et al. Heterogeneous tumour-subpopulations co-operate to drive invasion (2014). *Cell Reports*

Provided by Cancer Research UK

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