

Unraveling science mystery of how smoking causes lung cancer: It's the basal stem cells

Years of painstaking tissue analysis have lead researchers to basal stem cells as the likely culprits that trigger a major lung cancer closely tied to smoking: squamous cell carcinoma.

Basal stems cells are very quick at repairing DNA damage caused by inhaled chemicals such as those from cigarette smoke, but they are prone to making mistakes. It means that the more repair work they have to do, the greater the chance of a cancer-causing mutation.

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By identifying a cell of origin, [Clare Weeden, a PhD candidate at the University of Melbourne], says we now have a drug target to aim at that has the potential to stop the progress of the cancer.

Does this mean that at some point in the future smokers could breathe easier by taking a drug that could stop the cancer being triggered? No. Weeden points out that if someone took such a drug and continued to smoke the damage could be even worse than the cancer.

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She says the biggest beneficiaries of any such drug could be ex-smokers. "This is particularly relevant as lung squamous cell carcinoma can occur in ex-smokers who have quit perhaps 20 or 30 years ago."

[The study can be found [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [These cells may explain why smoking causes lung cancer](#)