

Edinburgh University research may help therapies for lung cancer

University of Edinburgh Researchers funded by Cancer Research UK have discovered a type of immune cells which might help offer lung cancer patients a more accurate prognosis. It will also help in identifying who will benefit from immunotherapies.

The location of cytotoxic T cells (which are key in fighting cancer) in and around tumours may help predict patient survival and whether treatments will work. It is thought that the cells may become 'exhausted' when battling tumours. As tumours grow they use complex mechanisms to escape destruction, including interfering with the activity of immune cells, such as T cells.

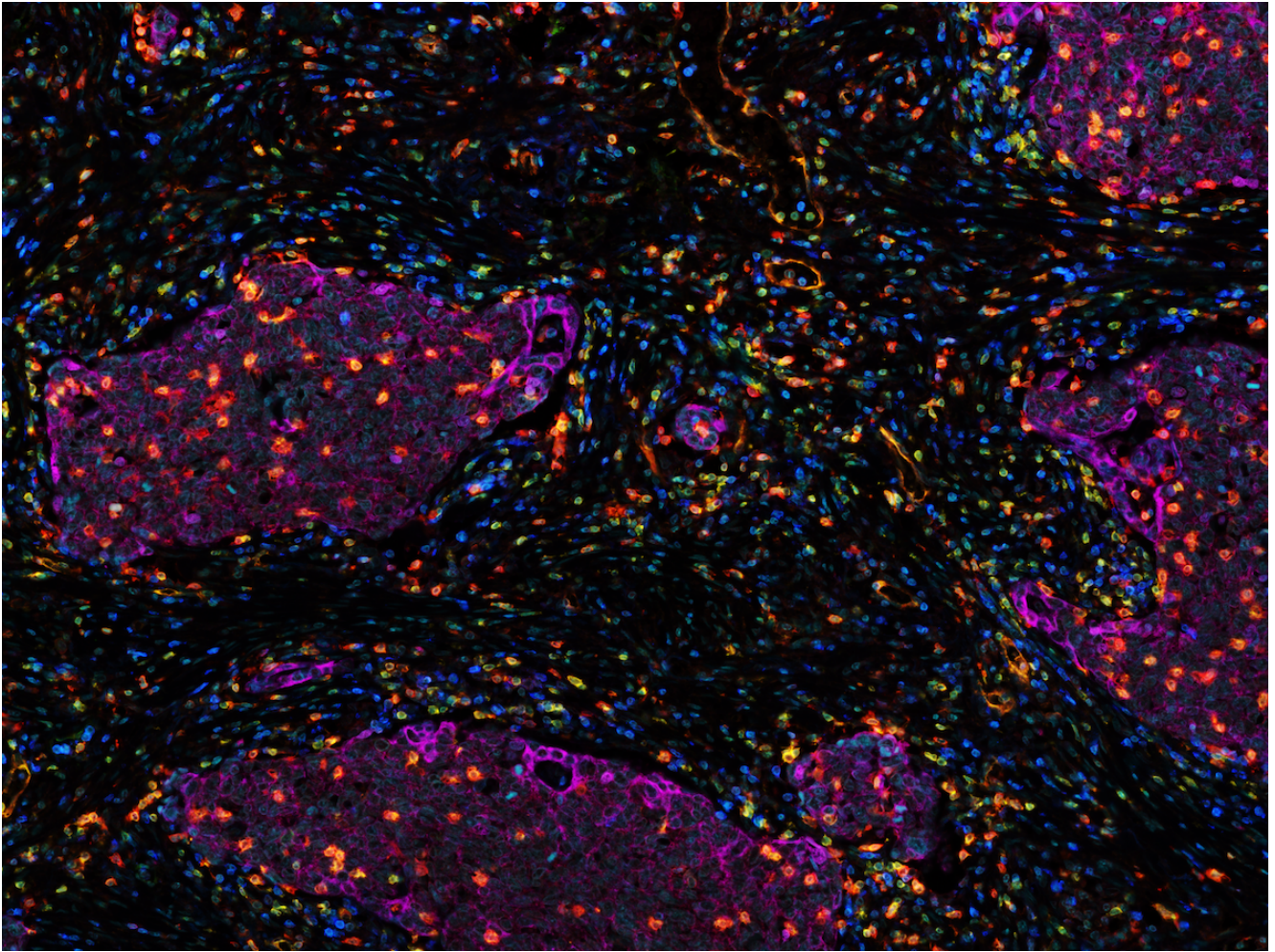
This work may help to uncover improved immunotherapies which are powerful but expensive treatments and which are not successful in 80 per cent of cases. But there is more research and tests needed before any application in clinical practice is possible.

Lung cancer is one of the world's most common and remains the leading cause of cancer-related deaths. Late diagnosis may also lead to less effective conventional treatments.

Looking into the reasons for immunotherapy failing to work in cancer patients researchers examined molecules which interfere with activity of T cells, the type of white blood cell which fights disease.

Dr Ahsan Akram, Cancer Research UK Clinician Scientist Fellow at the University of Edinburgh's Centre for Inflammation Research, said: "This study helps us to understand that we need to know the types of T cells in the cancer and their location within the tumours to begin to appreciate the complexity we are dealing with. We hope these results will lead to more research in this area, and in the future could help to identify patients who will do well with immunotherapies, as well as identifying earlier those that may not, so alternative treatments can be tried."

Dr Catherine Elliot, Cancer Research UK Director of Research Funding Communications, said: "Immunotherapy is an exciting and growing focus of cancer research. We are delighted to see the findings of this research which helps us to better understand why these treatments work better in some people than others. We hope that this can lead to more effective treatments for cancer patients."



Clusters of lung cancer cells, known as the tumour nests (purple), infiltrated by cytototoxic T cells (orange) Credit – Lilian Koppensteiner.png