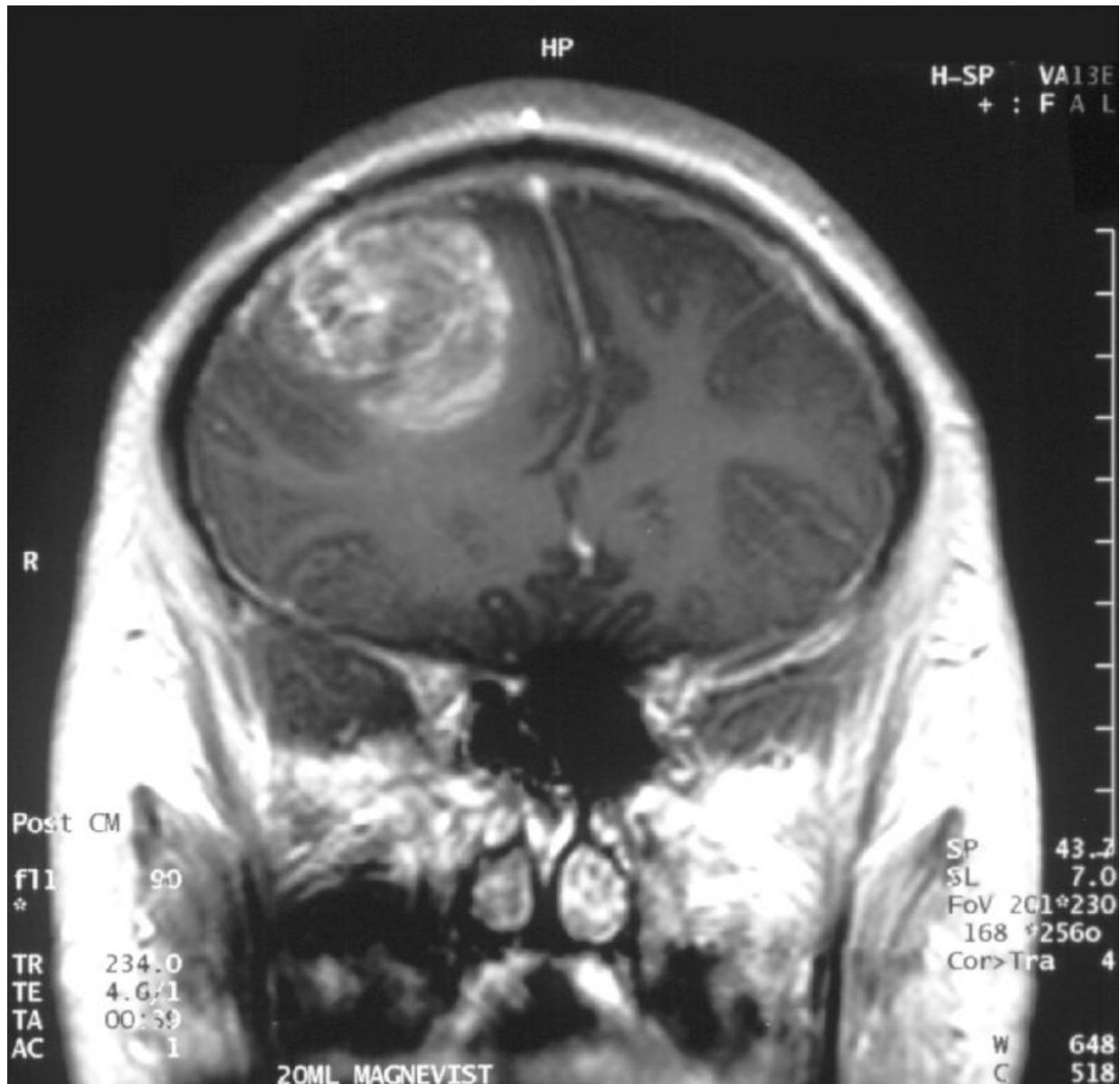


Fat fuels aggressive brain cancers

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Glioblastoma (astrocytoma) WHO grade IV—MRI coronal view, post contrast. 15 year old boy. Credit: Christaras A/ Wikipedia.

Fat is powering tumour growth in brain cancer, finds a new study by Cardiff University and the University of Florida.

Investigating the different types of [cells](#) in glioblastoma, the research team have gained a valuable insight into what fuels slow and fast dividing cancer cells, unveiling the potential to target aggressive [brain cancer](#) more effectively.

Dr. Florian Siebzehnrubl, European Cancer Stem Cell Research Institute at Cardiff University, said, "Glioblastoma is the most common and aggressive form of brain cancer in adults, and this disease currently has no known cure.

"Part of the reason why glioblastomas are so deadly is due to the presence of many types of cancer cells within the same tumour.

"We wanted to understand what fuels the different cells, and hopefully use this information to make targeted therapies that will improve patient survival."

The researchers found that the slow-dividing cells are more invasive and are resistant to cancer therapies, and also found that they use a different type of fuel than the fast-dividing cells in the same tumour.

Dr. Siebzehnrubl added, "We found that the cells that divided quickly used sugar as their fuel, whereas the slow-cycling cells used fat to generate energy. This is important, as we know that these slow-dividing cells are present in reoccurring tumours, meaning that this kind of cell might be responsible for tumour regrowth.

"By blocking the slow-dividing cells from absorbing fat we can improve

their responsiveness to treatment and in the future develop therapies that are specifically target the slow-cycling cells. This would potentially help improve survival rate in this aggressive form of brain [cancer](#)."

Provided by Cardiff University

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