Cambridge scientists have built a virtual reality (VR) 3D model of cancer that allows viewers to ‘fly’ through tumor cells, observing every detail from different angles. The advance paves the way for better understanding cancer, and developing new treatments for it.

The tumour sample, taken from a patient, can be studied in detail and from all angles, with each individual cell mapped. “No-one has examined the geography of a tumour in this level of detail before; it is a new way of looking at cancer,” Greg Hannon, director of Cancer Research U.K. Cambridge Institute (CRUK), told the BBC.

Researchers started with a 1 mm cubed piece of breast cancer tissue biopsy, containing around 1,00,000 cells. They cut wafer thin slices, and then stained them with markers to show their molecular make-up and DNA characteristics.

The tumour was then re-built using VR, which allows multiple users from anywhere in the world to examine it. Although the human tissue sample was about the size of a pinhead, using the VR headsets, it could be magnified to appear several metres across.

To explore the tumour in more detail, the VR system allows one to ‘fly through’ the cells.