

# Super Vision: MRI Scanners Replace The Need For Riskier Surgical Procedures

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The technique was developed by a number of UK academics during the 1970s and 1980s. In 1976 Peter Mansfield at the University of Nottingham was the first to publish a successful MRI scan of a living human body part — a finger.

“ Approximately 15,000 MRI scanners are now used in hospitals around the world, replacing the need for riskier surgical and X-ray procedures.

The machines are standard kit for doctors detecting neurological diseases such as stroke, cancer, multiple sclerosis and Alzheimer's disease. Sir Peter was awarded the 2003 Nobel Prize for Medicine (joint with Paul Lauterbur) for his work in developing the concept of MRI and for pioneering ultra-high speed imaging techniques.

During the 1980s John Mallard at the University of Aberdeen took MRI another step forward when he discovered a technique, known as spin-warp imaging, that could produce three-dimensional images unaffected by the movement of patients. MRI scans produce a map of the water content of the parts of the body using magnetic and radio waves. It is based on a phenomenon discovered by scientists in the 1930s, called nuclear magnetic resonance, in which magnetic

fields and radio waves cause atoms to give off tiny radio signals. The MRI scanners convert the signals into visual images.

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