

M.R.I., 1974

By Nicholas Bakalar

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The technology for measuring the magnetic properties of atomic nuclei goes back to the 1930s. But it took decades for scientists to put it to medical use.

On Feb. 9, 1974, The New York Times reported in its Patents of the Week column that Dr. Raymond V. Damadian, a physician and biophysicist at Downstate Medical Center in Brooklyn, had patented a method for distinguishing normal from cancerous tissue by what was then called nuclear magnetic resonance.

The apparatus was “still under development,” the article said, and it mentioned several other patents recorded that week, including one for a new kind of no-iron all-cotton fitted bedsheet.

On Oct. 12, 1975, The Times described one of world’s most powerful N.M.R. spectrometers, built at Stanford University. The article said nothing about its potential use in medical diagnoses.



On July 21, 1977, Dr. Damadian was in the news again. He had announced a new technique for detecting cancer, using a one-and-a-half-ton, 10-foot-high device equipped with what he called “the world’s largest magnet.” His news release apparently exaggerated a bit, and Dr. Damadian later retracted a contention that his technique had already been used to discover cancerous tissue in a living patient.

By late 1978 other imaging techniques — positron emission tomography (PET scans), computed tomography (CT or CAT scans) and ultrasound — were already being used in humans, and on Nov. 14, the lead article in the first issue of Science Times described the new procedures. Mention of nuclear magnetic resonance was relegated to the last two paragraphs, where it was called “one of the newest methods of imaging, and probably furthest from clinical application.”

But in the early 1980s magnetic scans were being performed on humans, and hospitals had begun buying the devices. As the machines became more widely used, the word “nuclear” in the name frightened some patients with its suggestion that nuclear radiation was involved. An article on March 17, 1985, explained that now most doctors were calling both the procedure and the machines “magnetic resonance imaging,” or M.R.I. It was the first time The Times used the term that is universally accepted today.

On Oct. 7, 2003, The Times reported that Paul C. Lauterbur and Sir Peter Mansfield had won the Nobel Prize in Physiology or Medicine for “discoveries of imaging with magnetic resonance,” in the citation’s words, that “have played a seminal role in the development of one of the most useful imaging modalities in medicine today.” Dr. Damadian took out full-page newspaper ads to complain that he had been unfairly denied the prize.

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