

BREAKING NEWS IN RADIOLOGY

MRI & CT Herald Exciting Advances in Patient Care

The effectiveness of magnetic resonance imaging (MRI) and computed tomography (CT) in the screening and diagnosis of potentially life-threatening ailments continues to receive a great deal of attention among medical researchers.

Out of these researchers' studies, a recurrent, resounding theme is emerging: MRI and CT scanning are in many cases more accurate yet less invasive than traditional procedures designed for the same purpose.

From the virtual colonoscopy to coronary artery calcium scoring to screening for tumors in the lungs, Mayfair's state-of-the-art technologies can provide patients with an extraordinary look into the future of their health.



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DIAGNOSTICS

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TIME MACHINE INDEED!

Like the time machines of science fiction, the state-of-the-art MRI and CT technologies employed by Mayfair Diagnostics allow you to travel forward in time and explore the unknown – a journey of discovery that may allow you to alter your future and potentially prolong your life.

And now, CT technology is being used to travel back in time and uncover history's long-hidden secrets. According to a May 7 article on MercuryNews.com, curators at the Rosicrucian Egyptian Museum & Planetarium in San Jose, CA, are working with scientists and radiologists to unravel the life story of a 2,000-year-old mummy of an Egyptian child – without even lifting the wraps.

The team – which includes anthropologists, orthopedists and pediatric dentists as well as radiologists – will analyze about 30,000 high-resolution CT scans performed at Stanford's School of Medicine. Noninvasive CT scanning produced three-dimensional views inside the fragile mummy by combining two-dimensional cross-sectional images, or "slices."

The team's hope is to pinpoint the child's age to within six months. And a theory that the child experienced walking difficulties due to pelvic asymmetry revealed in earlier x-ray images will be tested by re-creating the mummy's walk from 3D images.

"We're going to be able to hopefully tell the story of this child," said curator Lisa Schwappach-Shirriff.

PUT YOUR MIND AT EASE

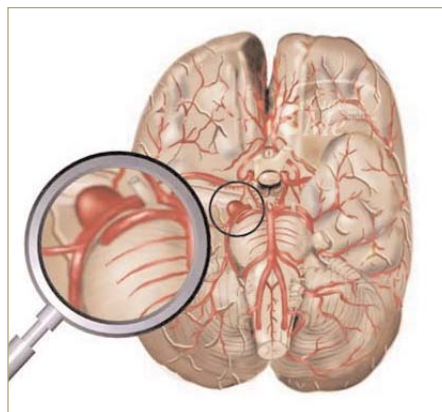
A cerebral aneurysm results from a weakness in the wall of a cerebral artery, which bulges out like a small balloon. Pressure against the surrounding nerves can cause a variety of symptoms; and if the “balloon” bursts, bleeding inside the skull cavity can result in severe headaches and a potentially life-threatening increase in pressure.

According to the Cleveland Clinic Department of Neurosurgery, which U.S. News & World Report consistently ranks as one of America's Top 10 neuroscience programs, patients at increased risk for the development of aneurysms should be considered for CT or MRI scanning, effective tools for identifying the size and location of aneurysms.

Aneurysms occur most often in older Caucasian men: by age 80, over 5% of Caucasian men will develop an aneurysm. Women tend to be at lower risk, and people of African-American descent rarely develop aneurysms.

Of the estimated 10-15 million Americans with cerebral aneurysms, about 30,000 experience aneurysm ruptures every year.

If you belong to a high-risk group or have a known family history of aneurysms, opting for an MRI at the time of your CT Health Assessment Scan may be prudent. Mayfair offers a 25% discount on MRI exams when booked together with a CT Health Assessment Scan.



Above is a depiction of a dangerously weakened artery, known as a cerebral aneurysm.



BEYOND THE BOWELS

A study published in the August issue of *Radiology* reveals that in addition to detecting colorectal cancers, virtual colonoscopy can reveal other “clinically important” conditions that would be missed by standard colonoscopy.

“This is a test for colorectal cancer screening,” said lead researcher Dr. Judy Yee, Chief of Radiology at the Veterans Affairs Medical Center and Vice Chairwoman of Radiology at the University of California, San Francisco School of Medicine. “But it can detect significant findings outside the colon as well.”

After performing virtual colonoscopies (a.k.a. “computed tomographic colonography”) on 500 male patients, Yee’s team evaluated the incidence of potential health problems outside the colon. 315 patients had “extra-colonic findings” and 45 had “clinically important” ones, including large aneurysms, suspicious lesions and masses in the solid organs of the abdomen, and thickening of the gallbladder wall.

“This study reminds us the virtual colonoscopy is a CT scan of the whole abdomen and pelvis,” said Dr. Joseph T. Ferrucci, Chairman of Radiology at Boston University School of Medicine. “Yee’s data adds to the argument to have an imaging test rather than invasive colonoscopy. **Computed tomographic colonography, right now today, is a viable alternative to colonoscopy.**”

