

Vital Signs

SUMMER 2014 | VOLUME 63

FEATURE STORIES

Sun Protection

Page 4

Helping Seniors Stay Healthy

Page 6

Q&A: Coordinating Care to Benefit Patients

Page 8

Community Calendar

Page 12



Using 4D CT Imaging, Surgeons Locate Abnormal Parathyroid Glands Before Operating

Most people have four tiny parathyroid glands (PTs) in the neck that produce the hormone responsible for regulating the balance of calcium and phosphorous in the blood. If one or more PT glands becomes enlarged or overactive (hyperparathyroidism), it may be necessary to surgically remove the gland. UCLA is now one of the few centers in the country where experts are using 4D computed tomography (CT) to pinpoint the exact location of hard-to-find abnormal PT glands, enabling surgeons to perform more efficient procedures with excellent outcomes.

[Continued on page 7](#)



long as the aerobic activity involves an increase in heart rate and some sweating.

For seniors who are frail, armchair exercises — marching in place while seated, using light weights with the arms — can be a good place to start before embarking on walking on an even surface with comfortable shoes. The 30 minutes a day can be divided up rather than being done all at once, Dr. Danovitch notes.

Seniors with specific medical conditions can find ways to accommodate them, she adds. Those with diabetes might need to snack before exercise or talk to their doctor about adjusting their medication around exercise times. Individuals with arthritis might need to modify activities to go easier on certain joints. Those who have balance concerns may want to work with a chair or partner, or start with guided physical therapy as they build their strength and stamina. Seniors with a heart condition are advised to get medical clearance before embarking on an exercise program, but they, too, have much to gain from slowly building up their routine.

“I counsel my older patients that if they don’t use it, they’ll lose it,” Dr. Danovitch says. “The loss of muscle mass and strength from inactivity occurs much more quickly in seniors than it does in younger individuals. Any movement is better than nothing, and you go from there.”



To view a video about senior physical activities, go to: uclahealth.org/senioractivity

Continued from cover

High-Tech Imaging Helps Surgeons Locate Abnormal Parathyroid Glands Before Operating

“When surgeons don’t know where to look for problem PT glands, the operations are longer, riskier and less likely to succeed,” explains UCLA radiologist Ali Sepahdari, MD, who is refining the use of the 4D CT to locate abnormal PT glands.

Conventional techniques — ultrasound and nuclear — fail to locate PT abnormalities prior to surgery in approximately 20-to-30 percent of cases, according to Dr. Sepahdari. Although CT is also considered a conventional technology, it is being used in a novel way that has enabled experts to locate very small PT glands in more than 90 percent of cases.

“CT scanners and contrast are available everywhere,” Dr. Sepahdari says. “It takes careful attention to detail to inject the contrast at just the right rate, scan the patient at just the right time and hone in on just the right anatomy,” he adds. Although 4D CT uses approximately 25-to-30 percent more radiation than nuclear-medicine techniques, the risk for complications from radiation is still very low, according to Dr. Sepahdari, and his goal is to continue to reduce the radiation dose so that the technology is appropriate for use in more patients.

“We’ve been able to cure patients who otherwise would not have been cured,” says Avital Harari, MD, a UCLA endocrine surgeon. In most patients with hyperparathyroidism, only one of four glands is diseased and is sometimes missed during the first attempt at surgical removal, she explains.

“Treating PT disease can be tricky because surgeons may go in to remove the problem gland and can’t find it, or they remove one gland and discover later that more than one gland was abnormal,” Dr. Harari says. “Repeat operations are much harder

because once you enter the neck surgically, you scar it. It is much more challenging and riskier to dissect within scar tissue.”

4D CT may be used in initial surgeries for patients in whom abnormal PT glands are not successfully located using conventional techniques or for patients who have thyroid disease, which makes ultrasound less accurate. The primary indication for the technology, however, is re-operative surgeries.

“4D CT is a game changer for re-operative cases,” says Michael Yeh, MD, who directs the Endocrine Surgical Unit at UCLA. “It has supplanted all other imaging techniques because it provides very high resolution and allows us to perform focused repeat surgeries with high cure rates,” he says. Dr. Yeh recommends that patients with PT disease seek out experienced surgeons to reduce the chance that repeat surgeries will be necessary.

“Barring that, if you have re-operative surgery, you really need this technology,” he says.



To view a video about 4D CT imaging for PT glands, go to: uclahealth.org/ptscanning

