

## ► Improved Surgery for Concave Chest

Under reported and undertreated, pectus excavatum (PEX) is no longer considered a benign condition. This congenital concave deformity of the sternum is known today to often cause progressive cardiopulmonary issues in the significant number of adults in whom it remains uncorrected. Surgical strides, though, have now made that correction a less-invasive and more-tolerable procedure.

Pectus deformity is a developmental chest-wall abnormality present in approximately one in 400 births and typically becomes more evident in the early teen years. Conventional surgery for the problem required anterior chest wall exposure, sternal osteotomy, extensive cartilage resection, and muscle and skin-flap repair.

“Though pectus is certainly a cosmetic issue for the adolescent, there has been reticence to treat it in this traditional way because the ribs must grow back for complete chest wall stability and that may take six months,” said Matthew Puc, MD, Chief, Virtua Section of Thoracic Surgery. “Now, we have a newer approach that avoids those drawbacks and that we are providing to adults as well.”

### Chest Gradually Reforms Over Bar Implants

The Virtua Health team makes small incisions in the chest under each arm and inserts a slim thoroscope and other tools to advance a curved, custom-fit steel bar under the



PEX repair means placement of a substernal convex bar behind the sternum to correct the chest deformity and improve breathing and cardiac function.

depressed breastbone to raise it outward and stretch the ribs forward. The surgeon secures the bar to the chest wall on both sides. Patients spend several days in the hospital.

Pain medications, nerve blocks, and anesthetic infusion pumps assist them through acute recovery. In a few weeks, patients can resume nearly all activities short of contact sports. “Patients don’t have much sensation from the bars after a few months of complete healing,” said Dr. Puc.

With this PEX treatment, the chest gradually reforms, as the sternum and associated cartilage and ribs remodel in response to the bar, which will be removed in an outpatient procedure after about two years in adolescents and after about three years in adults (who generally have at least two bars implanted).

### Solving Failed Open Repairs & Late Symptoms

Uncorrected, PEX can cause pain, compress the lungs and heart, and decrease exercise tolerance. For patients with major defects, the Virtua team still offers the conventional approach.

**“Pectus as a problem is showing up more in the adult population, where it’s been largely missed.”**

According to Dr. Puc, patients who come to Virtua for this service fall into two groups:

- Those who have previously had an open repair that has failed. He noted a recent patient in his 40s who was a runner who began to notice he could not keep up with his running companions, a condition that resolved when he elected to have revision surgery.
- Those who have never been repaired but start to experience more symptoms in adulthood. He noted a recent patient in his 20s who noticed fatigue when he began a physically active job.

The majority of repaired patients enjoy improvement in all dimensions of PEX. They feel better physiologically, as respiration and pumping ability of their heart is improved. They are pleased with the cosmetic results and typically have positive changes in their self-esteem, confidence, and mood.

**For referral, call 856-355-7176.**

## Testing and Tracking Patients at Risk for Lung Cancer

Rigorous, proactive population health involves early disease detection, and Virtua has applied that philosophy to the top cancer killer: lung cancer. Patients in this service have the advantage of a well-established and highly structured lung cancer screening program to which physicians can refer.

“Only about 10 percent of patients who should be screened for lung cancer actually get screened,” said Bridget LeGrazie, Director of Oncology Support Services at Virtua.

Annual lung cancer screening with helical low-dose CT (LDCT) scanning is recommended for persons who meet all three of these criteria:

- ▶ Have a history of heavy smoking (i.e., a smoking history of 30 pack-years or more)
- ▶ Smoke now or have quit within the past 15 years
- ▶ Are between 55 and 77 years old

A second group qualifying for screening are those over 50 with a 20 pack-year history and an additional risk factor (including exposures such as diesel, radon, or smoke; family or cancer history; or other lung disease).

The Virtua lung screening program features a dedicated nurse navigator who also accepts referrals for those with clinically significant findings (including confirmed malignancy or nodules requiring surveillance) to Virtua’s Comprehensive Lung Program. Using software-supported protocols, the staff tracks patients from year to year and works to enroll all smokers in its multifaceted smoking-cessation program.

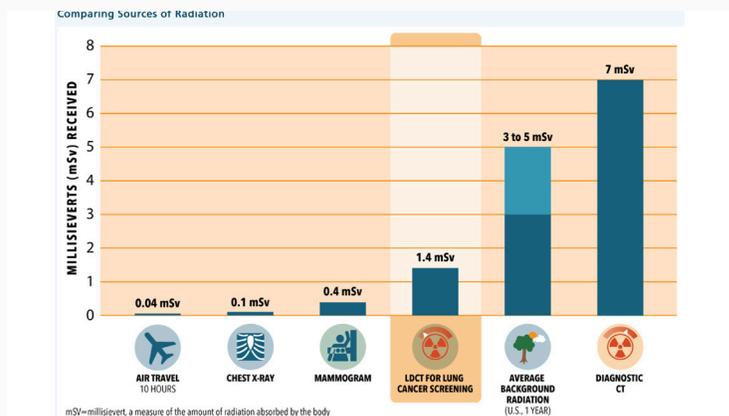
Virtua is one of 16 designated screening programs in New Jersey and provides LDCT at five locations. The program offers a reduced fee for under-insured individuals who meet criteria and eligibility. Virtua also offers group smoking cessation for free via Zoom. In addition, patients have no co-pay for individual counseling in the thoracic surgery group.

Most referrers are Virtua Medical Group providers (with referral available directly through the EPIC EMR) but the program encourages outside referrals. **Script:** Low Dose CT of the Chest for Lung Cancer Screening (with Virtua as the location). **Procedure Code:** G0297

**Screening Diagnosis Code:** Z87.891

“Detection as early as possible is a key to how we are improving survival from lung cancer,” said LeGrazie.

**Contact Virtua’s Lung Cancer Screening Program at 856-247-7393 or lsheely@virtua.org.**



Source: Agency for Healthcare Research & Quality, U.S. Department of Health & Human Services. <https://effectivehealthcare.ahrq.gov/decision-aids/lung-cancer-screening/patient.html>