ES Catheter vs Cryoablation After Pectus Surgery

Status: RECRUITING

Eligibility Criteria

Sex: ALL
Age: 12 years to 21 years old
Healthy Volunteers: This study is NOT accepting healthy volunteers
Inclusion Criteria:

- Age 12 - 21 years
- History of pectus excavatum
- Scheduled for Nuss procedure

Exclusion Criteria:

- Prior pectus repair
- Other concomitant surgeries
- Chronic pain conditions including Ehlers Danlos Syndrome
- Non-English speaking - rationale: the questionnaires used in the study are in English language and the social and cultural factors of pain perception of non-English speaking patients could affect the study power
- Severe developmental delays including cognitive (difficulties understanding), motor (cerebral palsy or muscular dystrophy), and speech delays (difficulties communicating)
- History of or active renal or liver disease
- Major surgery requiring opioids in the last 2 years
- Severe respiratory problems (such as obstructive sleep apnea, cystic fibrosis, pulmonary fibrosis, or pneumonia within the last month)
- Cardiac conditions including, but not limited to, cyanotic heart disease, hypoplastic left ventricle, arrhythmia, uncontrolled hypertension with ongoing treatment, Kawasaki disease, or cardiomyopathies. Participants with asymptomatic valvular lesions or defects may be included
- BMI >35
- Pregnant or breastfeeding females

Conditions & Interventions

Interventions:
PROCEDURE: ES catheter, PROCEDURE: Intercostal nerve cryoablation (INC)
Conditions:
Pectus Excavatum

More Information

Description:
Participants will be randomized to receive ES catheter or cryoablation for pain management after the Nuss procedure. The goal of this study is to compare the following between the two groups: * Time to achieve short-term physical therapy goals and long-term functional outcomes * Compare immediate and long-term postoperative opioid use * Compare numbness on chest of postoperative day 1 and the return of sensation to baseline * Compare the incidence of neuropathic pain and other complications Participants will receive surveys for up to 12 months postoperatively.

Contact(s): Kristie Geisler - kristie.geisler@cchmc.org
Principal Investigator:
Principal Investigator ID:
Phase: NA
IRB Number:
System ID: NCT06682208