Society of Thoracic Surgeons

General Thoracic Surgery Database
New Data Manager Webinar

October 25, 2023
Agenda

• Welcome and Introductions
• Introduction to STS and the Databases
• Role of the Data Manager
• Data Manager Resources
• How to read the Data Collection Form (DCF)
• Required fields
• Intro to Data Specs

• Intro to Training Manual
• Submitting a question
• Keys to abstracting data
• Building a relationship with your surgeon
• Ensuring Clean Data
• Data Submission Deadlines
• Additional STS Resources
Donna McDonald, Vice President of Quality

Jane Han
Vice President of Quality and Research Operations

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Director, STS National Database

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National DB Manager, Intermacs/Pedimacs

Leigh Ann Jones
National DB Manager, General Thoracic & Congenital

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Senior Manager, Quality and Research Center
Introduction to STS and the Databases

• Society founded in 1964
  “To enhance the ability of cardiothoracic surgeons to provide the highest quality care through education, research, and advocacy”

• Today has more than 7500 members in 99 countries

• More than 80 employees in Chicago and D.C.

• The first database was started in 1989 as an initiative for quality improvement and patient safety among cardiothoracic surgeons
  • Response to HHS/HCFA (now CMS)
  • Malpractice lawsuits related to a misperception of the risk associated with surgery
  • JCAHO’s requirement of all health systems to have a QA program used for surgeon recredentialing
  • Threats to reimbursement
Introduction to STS and the Databases

- Accomplishments of the STS National Databases
  - Improved Patient Outcomes/Patient Safety
  - Developed Clinical Practice Guidelines
    - Blood Conservation
    - Antibiotic Usage
  - Voluntary Public Reporting
    - Sites who publicly report have better outcomes
Introduction to STS and the Databases

• General Thoracic Surgery Database (GTSD) started in 2003
• Today has more than 903 surgeons at 287 national and international site(s)
  • International site: New Zealand
  • Approximately 60% of these sites participate in GTSD Public Reporting
• Contains more than 719,000 records for more than 612,000 patients
The Data Abstractor/Data Manager Role

• Your Role
  • Abstract Data
  • Submit Data
  • Clean Data
  • Quality Improvement Projects
  • Charting
  • Best Practices
  • Improve Workflow on Units
  • Improve Team Work
  • Quality Assurance Meetings with Surgeons and Supporting Departments
  • Administration Reporting on Star Ratings
Data Manager Resources

- STS Website
- Webinars
- Mentorship Program
- Advances in Quality and Outcomes
- Database Newsletter
- Clinical Support
Data Manager Resources

STS National Database
The gold standard of cardiothoracic surgery clinical outcomes registries, with nationally recognized quality performance measures for adult cardiac, general thoracic, congenital heart surgery, and mechanical circulatory support.

IQVIA ACCESS
Data Manager Resources

General Thoracic Surgery Database

The STS General Thoracic Surgery Database (GTSD) is the largest and most robust clinical thoracic surgical database in North America. The GTSD contains more than 700,000 general thoracic surgery procedure records and currently has more than 1,000 participating surgeons.

Data Manager Resources

Visit the Resources for Data Managers page for important forms, upcoming webinar schedules, harvest deadlines, and more.

Congenital Heart Surgery Database

The STS Congenital Heart Surgery Database (CHSD) is the largest database in North America dealing with congenital cardiac malformations. The CHSD contains more than 600,000 congenital heart surgery procedure records and currently has more than 1,000 participating physicians, including surgeons and anesthesiologists.
Data Manager Resources

Data Manager Guidance

Advances in Quality & Outcomes: A Data Managers Meeting

Surgeon leaders and data managers will gather during AGA this year — virtually — to share valuable research and important clinical findings with the goal of improving data collection and patient outcomes. The event dates are September 26-29, 2023, with each day dedicated to one registry. Learn more.

Data Manager Mentorship Program

The STS National Database mentorship program pairs experienced data managers with those who are seeking advice related to data abstraction. After filling out a questionnaire, potential mentors and mentees will be matched based on database type, experience in specific areas, and other factors. Apply as either a mentor or mentee. You will be notified once you have been matched.

If you have questions about the program or any feedback on the sign-up forms, contact National Database Coordinator Adelaide Dolan.

Regional Groups

STS National Database regional groups offer a collaborative networking environment for peer-to-peer support and non-clinical guidance related to data abstraction. Learn more.

STS National Database News

This bimonthly e-newsletter offers news and updates about the STS National Database, with a separate issue for each of the four registries. STS data managers receive a free subscription for each registry in which they participate. Do you have colleagues who should be receiving STS National Database News? Or would you like to receive a copy? Fill out this form to be added to the mailing list for future issues.
STS Database Newsletter

**General News**

**STS Launches Next-Generation Adult Cardiac Surgery Risk Calculator**

The Society of Thoracic Surgeons has launched its next-generation Operative Risk Calculator to assess the risk of adult cardiac surgery operations.

The STS Adult Cardiac Surgery Database represents 97% of all cardiac operations performed in the United States and the new calculator is based on precise statistical models from the experience of more than 8 million patients. The dynamic Risk Calculator is mobile-friendly and features a simplified, intuitive user design to improve physician-patient decision-making, allowing surgeons and multidisciplinary medical providers to estimate a patient’s risk in real time. The risk calculations are based on the most current nationwide 2023 data from the STS Adult Cardiac Surgery Database and these are informed by robust risk models that continuously update every three months. Learn More.

**Join the Data Manager Mentorship Program**

The STS National Database mentorship program pairs experienced data managers with those seeking advice related to data abstraction. And it’s easy to participate. Simply fill out a questionnaire and mentors and mentees will be matched based on database type, experience in specific areas, and other key factors.

Apply as either a mentor or mentee. You will be notified once you have been matched.

If you have questions about the program or any feedback on the sign-up forms, contact National Database Coordinator Adelaide Dohan.

**Harvest Schedule Update**

The STS webinar held July 19, 2023, is designed to help improve national quality initiatives. Watch it here.

**GTSD Update**

**GTSD New Data Managers Recorded Webinar Now Available**

If you missed the June webinar for GTSD data managers, originally held on June 14, 2023, check out the recorded session now available. This monthly educational webinar for data managers in the GTSD includes updates from STS, such as harvest deadlines, audit notifications, Information about the 2023 AQO meeting, and attendee questions. Watch it here.

**Harvest Schedule Update**

The STS webinar held July 19, 2023, is designed to help improve national quality initiatives. Watch it here.

**Harvest Schedule Update**

The Harvest submission window for Harvest 3 term is August 18, 2023. Opt-out date is August 22, 2023. This reporting period includes procedures performed by June 30, 2023.

**General Thoracic**

**Congenital**

sts.org
Data Manager Mentorship Program

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Apply as either a mentor or mentee. You will be notified once you have been matched.

If you have questions about the program or any feedback on the sign-up forms, contact National Database Coordinator Adelaide Dolan.
MANAGERS MEETING which features sessions for all four components of the STS National Database. This year’s meeting will be held virtually from September 26-29, 2023.

This meeting includes live sessions at scheduled times and recorded programs that you can watch at your convenience. Speakers will offer the latest information about the Database, including version upgrades and new features, as well as provide timely tips on improving data collection and abstraction. You can also review and vote on your favorite e-poster.

Data managers and surgeon leaders will come together to share valuable research and best practices with the goal of improving data collection and patient outcomes. STS recognizes that data managers are the backbone of the Database, which is why this meeting has been designed specifically for you! Your contributions are vital to the success of many quality initiatives that ultimately lead to better patient outcomes.

Thank you for being here. I am confident that you will benefit from this educational and interactive experience. Enjoy the meeting!

Felix G. Fernandez, MD
Chair, STS Workforce on National Databases

SAVE THE DATE!
ADVANCES IN QUALITY & OUTCOMES:
A Data Managers Meeting
SEPTEMBER 11-13, 2024

#TheFaceofCTSurgery
#blackhistorymonth

Advances In Quality and Outcomes: A Data Managers Meeting (AQO)
Clinical Support and Database Support

Clinical Question Request Form

Are you struggling with a clinical question regarding data abstraction? Fill out the Clinical Question Request Form and get a response within 30 days.

Submit a Request

Contact and Support

STS is available to help you with questions regarding the STS National Database.

If you have specific questions regarding the platform or participant reports, contact the STS National Database helpdesk. You will receive a helpdesk ticket, and STS will aim to follow up with you within 2 business days. Note: Heavy call and email volumes are anticipated as harvest deadlines approach. We appreciate your patience.

For general questions (like invoicing, updating contacts, or harvest schedules), contact the STS National Database staff team. For public reporting questions, contact STS Public Reporting.

Contact Helpdesk

Essential Forms and Resources

- Database participant role descriptions
- Database participant and platform roles
- Participant contact form
- Schedule A
- Schedule B
Data Collection Organization

- Who
- What
- When

Identify surgical cases

Data fields to collect

When to collect data
Identification of Surgical Population

• Identify gold standard source
  – reliable and reproduceable
  – OR log, IT report...

• Identify secondary source as a double check

• May update overtime
Data Collection Fields

- Identify sources for all fields
  - reliable and reproducible
  - EHR documentation, IT reports
- Utilize database Training Manual for guidance/definitions
- Utilize available resources for any questions/confusion
Program dependent
- Resources
- Volume
- EHR
- Data needs

Real time data collection
Post discharge data collection
Hybrid - combination
Reading the Data Collection Form (DCF)
**Procedure Inclusion** – The STS General Thoracic Registry version 5.21.1 requires submission of all lung resections for primary lung cancer and all esophageal resections for primary esophageal cancer. Lung and esophageal resections for primary cancer are analyzed including national outcomes for benchmarking, risk adjusted outcomes, and star rating. Participants in the General Thoracic Registry may choose to submit Thymus/Mediastinal Mass Resection, Tracheal Resection, and Hiatal Hernia/GERD cases. These case types are optional modules for submission to the registry and benchmark data will be available in the national report if submitted. All other case types are not required for collection or submission. They will not be available in the national report if submitted.

### Major/Analyzed (Required)
- Confirmed Lung Cancer Resections
- Confirmed Esophageal Cancer Resections
- Risk Adjusted

### Major/ Analyzed Procedures (Not Required)
- Optional Procedures
  - Thymus/Mediastinal Mass/Myasthenia Gravis
  - Tracheal Resection
  - Hiatal Hernia/GERD
  - Benchmark data provided

### Minor/Non-Analyzed Procedures
- Accepted into the database if you choose to collect
- Required fields "On Save" checks will be applied to these records

### Concomitant Procedures
- If a procedure considered ‘minor’ or ‘optional’ is done at the same time as an ‘analyzed’ procedure, then it needs to be included on the same DCF
Which Variables are Required?

• Per STS all variables are important
  – Parent/child relationships help reduce the number of missing data in the feedback reports

• Do not omit the fields included in the analysis report:
  - Mortality Variables
  - 'Required' Variables
  - Risk Model Variables

• Complete all fields consistently so they are meaningful internally and over time
A. Demographics

<table>
<thead>
<tr>
<th>Required Variables for Case Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>The variables underlined in blue must be included for your case to be included in analysis</td>
</tr>
</tbody>
</table>

- **Patient ID:**
- **Middle Name:**
- **Last Name:**
- **SSN/National Identifier Known:**
- **Permanent Street Address:**
- **Country:**
- **City:**
- **State/Region:**
- **Postal Code:**
- **Date of Birth:**
- **Age:**
- **Gender:**
- **Race:**
- **RaceMulti:**
- **Ethnicity:**
Understanding the Data Collection Form

What do these "weights" mean?

- Lung Cancer Resection
  - Weight = 60
- Esophagus Resection
  - Weight = 70
- Hiatal Hernia/Gerd
  - Weight = 30
- Trachea Resection
  - Weight = 40
- Thymus/Mediastinal Mass
  - Weight = 50
- Concomitant Procedures
  - Weight = 20
- Minor Procedures
  - Weight = 10
Data and Software Specifications

- The database is updated every 3 years
- The data and software specifications are key tools in this process
- It is important to understand how to read them
  - Definitions
  - Allowable values
  - Field type
  - Parent/Child Relationships
  - Specify vendor requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Patient declined to disclose</td>
</tr>
</tbody>
</table>

#### Race = White or Caucasian

- **Long Name:** Race = White or Caucasian
- **Short Name:** RaceCaucasian
- **Section Name:** Demographics
- **Definition:** Indicate whether the patient's race, as determined by the patient or family, includes Caucasian. This includes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

**Definition source:** Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity. The baseline categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. ([www.whitehouse.gov/omb/egov/1997/standards.html](http://www.whitehouse.gov/omb/egov/1997/standards.html))
Allowable Values

- Below 8.00 will show a warning, verify data
- Above 16.00 will show a warning, verify data

For values outside of the allowable value zone then you will code the highest or lowest ALLOWABLE value.

<table>
<thead>
<tr>
<th>Long Name: Last Hemoglobin Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Name: HemoglobinLst</td>
</tr>
<tr>
<td>Section Name: Pre-Operative Evaluation</td>
</tr>
<tr>
<td>DBTableName: Operations</td>
</tr>
<tr>
<td>Definition: Indicate the hemoglobin level closest management (induction area or opera</td>
</tr>
<tr>
<td>LowValue: 3.00 UsualRangeLow: 8.00</td>
</tr>
<tr>
<td>HighValue: 50.00 UsualRangeHigh: 16.00</td>
</tr>
<tr>
<td>Parent Long Name: Hemoglobin Level Measured</td>
</tr>
<tr>
<td>ParentShortName: HemoglobinMeasured</td>
</tr>
<tr>
<td>ParentValue: = &quot;Yes&quot;</td>
</tr>
<tr>
<td>ParentHarvestCodes: 1</td>
</tr>
</tbody>
</table>
The Training Manual

- Guidance on abstracting variables
- Intent/Clarification provided to further explain definitions
- Update monthly with new FAQ’s
- Refer to this to ensure you are abstracting correctly
- Check here first!
<table>
<thead>
<tr>
<th>Seq. Number</th>
<th>Short Name</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>580</td>
<td>Reop</td>
<td><strong>Aug 2021</strong>: Only capture prior surgical procedures within the same anatomical space – not percutaneous procedures such as chest tubes, thoracentesis, paracentesis etc.</td>
</tr>
<tr>
<td>650</td>
<td>HistCancer</td>
<td><strong>Aug 2021</strong>: Photodynamic therapy is not equivalent to thoracic radiation therapy and is not captured.</td>
</tr>
<tr>
<td>870</td>
<td>ECOGScore</td>
<td><strong>Aug 2021</strong>: Lung and esophagus cases will NOT be rejected due to a missing ECOG score.</td>
</tr>
<tr>
<td>1250</td>
<td>CategoryPrim</td>
<td><strong>Aug 2021</strong>: Metastatic lung cancer from a lung primary should be captured here, however new primary lung cancer or synchronous primary lung cancers should be captured with the appropriate lung cancer category of disease and not with C78.00.</td>
</tr>
<tr>
<td>1505</td>
<td>Laterality</td>
<td><strong>Aug 2021</strong>: Lung resections have laterality, most hernia repairs and esophagectomies do not and will be coded as N/A.</td>
</tr>
<tr>
<td>1620</td>
<td>ClinStagMeth</td>
<td><strong>Aug 2021</strong>: Question - How do I capture a Core Needle Biopsy of the lung mass itself preop? It is not a mediastinal lymph node biopsy? Answer – core needle biopsies of the lung mass are not captured in V5.21.</td>
</tr>
<tr>
<td>4270</td>
<td>Readm30Dis</td>
<td><strong>Aug 2021</strong>: Readmission applies to IP readmissions only. If a patient returns to the hospital and is in OP/OBS status for their entire stay, please code ‘no’ to 4270.</td>
</tr>
</tbody>
</table>
Case Scenario: Carcinoid

**Preoperative diagnosis:** Right bronchus intermedius typical carcinoid

**Postoperative diagnosis:** Right bronchus intermedius typical carcinoid

**Procedures:**
1. Right robotic assisted thoracoscopic mediastinal lymph node staging.
2. Right robotic-assisted thoracoscopic middle and lower bi-lobectomy.
3. Right bronchus intermedius bronchoplasty with pericardial flap.
4. Mediastinal lymphadenectomy
5. Thoracic field block
To Abstract or To Not Abstract, that is the question...

<table>
<thead>
<tr>
<th>TUMOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumor Focality</td>
<td>Single focus</td>
</tr>
<tr>
<td>Tumor Site</td>
<td>Bronchus intermedius</td>
</tr>
<tr>
<td>Tumor Size</td>
<td></td>
</tr>
<tr>
<td>Total Tumor Size (size of entire tumor)</td>
<td>Greatest Dimension (Centimeters): 2 cm</td>
</tr>
<tr>
<td>Histologic Type</td>
<td>Typical carcinoid / Neuroendocrine tumor, grade 1</td>
</tr>
<tr>
<td>Histologic Grade</td>
<td>G1, well differentiated</td>
</tr>
<tr>
<td>Visceral Pleura Invasion</td>
<td>Not identified</td>
</tr>
<tr>
<td>Direct Invasion of Adjacent Structures</td>
<td>Not applicable (no adjacent structures present)</td>
</tr>
<tr>
<td>Treatment Effect</td>
<td>No known presurgical therapy</td>
</tr>
<tr>
<td>Lymphovascular Invasion</td>
<td>Present: lymphovascular invasion present, favor venous invasion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARGINS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin Status for Invasive Carcinoma</td>
<td>Invasive carcinoma present at margin</td>
</tr>
<tr>
<td>Margin(s) Involved by Invasive Carcinoma</td>
<td>Bronchial: Tumor focally involves the superficial mucosal aspect of the bronchial margin; it is not deeply invasive at this site.</td>
</tr>
<tr>
<td>Margin Status for Non-Invasive Tumor</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGIONAL LYMPH NODES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lymph Node(s) from Prior Procedures</td>
<td>No known prior lymph node sampling performed</td>
</tr>
<tr>
<td>Regional Lymph Node Status</td>
<td>All regional lymph nodes negative for tumor</td>
</tr>
<tr>
<td>Number of Lymph Nodes Examined</td>
<td>13</td>
</tr>
</tbody>
</table>
Seq 1510: Make sure you read your FAQ’s

<table>
<thead>
<tr>
<th>SeqNo:</th>
<th>1510</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Name:</td>
<td>Primary Lung Cancer Resection Performed</td>
</tr>
<tr>
<td>Short Name:</td>
<td>LungCancer</td>
</tr>
<tr>
<td>Format:</td>
<td>Text (categorical values specified by STS)</td>
</tr>
</tbody>
</table>
| Definition: | Indicate whether a major lung resection was performed for a primary lung cancer (e.g. wedge, segment, lobe, pneumonectomy), open or VATS.  
If yes complete clinical and pathological staging. |

<p>| Harvest Codes: |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
</tr>
</tbody>
</table>

**July 2022:** Code ‘yes’ to 1510 for new primary carcinoid tumors of the lung that are therapeutically resected.
Choosing Primary Category of Disease

Be mindful of what will and will not be included in analyses. This is a lung cancer case, a lung cancer COD should be selected. Your options are:

Data versions 2.41 and 5.21.1:
Any of the following disease categories have been chosen as ‘Primary’ using SeqNo. 1250 (v2.41 and 5.21.1):
- 150 = Lung cancer, main bronchus, carina 162.2
- 160 = Lung cancer, upper lobe 162.3
- 170 = Lung cancer, middle lobe 162.4
- 180 = Lung cancer, lower lobe 162.5
- 190 = Lung cancer, location unspecified 162.9

The location of this lung cancer is technically hilar, which is not an option – I would therefore choose ‘location unspecified.’
Choosing Primary Category of Disease

Do NOT choose any of the below for a case with pathology that confirms the presence of new primary lung cancer:

- Solitary Pulmonary Nodule
- Lung Tumor, Metastatic
- Lung Nodule/Mass/Other
- Abnormal Radiologic Finding
- Lymphadenopathy
- Other Unlisted Category of Disease
A Word on Invasive Mediastinal Staging

By definition, staging must occur prior to surgical treatment. The surgeon’s pre-op H&P indicates that they planned to perform mediastinal staging at the time of surgery.

Did they carry out that plan? The procedure list makes me think so, but the operative note must be read to confirm that surgical resection of the lesion did not begin prior to pathology returning results on any staging procedure performed.

...I started with mediastinal nodal staging, and the inferior pulmonary ligament was taken down with bipolar cautery and the level 9 lymph nodes sent for frozen section. The lung was retracted anteriorly, and the level 7 nodal station dissected out and sent for frozen section. This was a large node, quite inflamed and adherent to the underlying bronchus intermedius and mainstem bronchus. The lung was then retracted inferiorly, and the level 2 and 4 nodal stations were dissected and sent for frozen section. Surgicel was packed into the nodal dissection beds for hemostasis. The frozen sections were reported as negative for any metastatic disease in the lymph nodes. As such, I then proceeded with the anatomic pulmonary resection...
Submitting a Clinical Question

If you have a question about submitting a case that is clinical in nature, then please submit it to the FAQ Mailbox.

• You will need
  • Participant Identification (PID)
    • This is a 5-digit number starting with a 4
  • Shortname and Sequence Number
    • Can be found on the annotated DCF or TM
  • As much information you can provide to help us answer your question
    • We can only answer based off the information you provide

• It can take up to 30 days for a response
  • We may have to discuss it with Surgeon Leaders
  • We may ask you for additional information
  • Please ensure the email you use is complete and correct when submitting an FAQ
Clinical Question Request Form

Are you struggling with a clinical question regarding data abstraction? Fill out the Clinical Question Request Form and get a response within 30 days.

Ask a Question

Full Name *

Email *

Phone *

Participant ID #

Database Version *
- Select -

State/Province *
- Select -
Keys to Abstraction

• Be consistent in where you obtain information but...
• Pay attention to source documentation
  • Use data that meets the listed requirements
    • Timeframe
    • Mode of testing
• If you can’t find it, ask your surgeon
• Do not guess. No data is better than bad data.
  • If you can’t find it, ask
  • This is different than out of range high/low value
Working with your Surgeons

• Surgeons are busy, be patient but persistent
• Be clear and concise
• Know what you are going to ask before you ask it
• Do your homework and know the facts
• Get involved with Quality Meetings and Department Meetings where the data is being discussed
• Ask to observe a case
• Offer to review data with the surgeon
• Offer tips on how documentation can be improved
  • Build EHR templates
  • Use Surgeon Worksheets
• Work with Nursing and OR staff – they can help you
Clean Data

• Your vendor will allow you to run internal QA checks on your data prior to submission

• IQVIA, the data warehouse provides you with
  • Data Quality Report
  • Harvest Summary Report
  • Critical Error Report

• Version 5.21.1 has ‘on-save’ consistency checks built into your vendors software that will prevent you from exporting your data if certain errors are present
Data Submission Deadlines

- Harvest submission deadlines occur twice a year for General Thoracic
  - Spring and Fall
    - Each report will be a star-rating
  - Voluntary Public Reporting Result are based on the Spring Harvest
    - Lung Cancer and Esophageal Cancer Cases
Additional STS Resources

• Monthly Didactic Webinar
• Monthly User Group Calls
• New Data Manager Webinars
• Advances in Quality and Outcomes: A Data Managers Meeting
  • AQO 2024 will be held September 11 – 13; Location announcement coming soon!!
Open Discussion

PLEASE USE THE Q&A FUNCTION
WE WILL ANSWER AS MANY QUESTIONS AS POSSIBLE
WE ENCOURAGE YOUR FEEDBACK AND WANT TO HEAR FROM YOU!
Contact Information

Leigh Ann Jones, STS National Database Manager, Congenital and General Thoracic
- Ljones@sts.org
- 312-202-5822

Ruth Raleigh, Trinity Health, GTSD Consultant
- rraleigh@sts.org
Thank you for joining!