

TexMed 2016 Quality Improvement Abstract

Please complete all of the following sections.

Procedure and Selection Criteria

- Applicants should demonstrate an understanding of QI concepts through the use of quality tools, measures of success and the use and interpretation of data. Judges will use the scoring described in this matrix to identify projects to be presented at the conference, as well as, projects to be considered for the awards.
- Maximum points are delineated with a brief explanation of the content that should be included under each section. Applicants must select one of the following improvement categories into which the project best fits: patient safety, patient centered care, timeliness, efficiency, effectiveness, or equity. Applicants may describe the problem and results in narrative or graphic format.

PROJECT NAME: "Tell me if I have lung cancer!" Decreasing Delay in Diagnosis for Lung Cancer Patients

Institution or Practice Name: UT Health Northeast - Tyler

Setting of Care: Pulmonary and Radiology Service Lines

Primary Author: Brenda Lee MSN, RN

Secondary Author: Dr. James Fox, Dr. Ted Willis

Other Members of Project Team: Misty Lewis BA, RN, John Davis, Dr. Robert Wells, Zane Robertson

Is the Primary Author, Secondary Author or Member of Project Team a TMA member (required)?

Yes No

Please provide name(s): Dr. James Fox

Project Category: (Choose most appropriate category)

- Patient Safety Patient Centered Care Timeliness
 Efficiency Effectiveness Equity

Enhanced Perioperative Recovery/Future of Surgical Care program

For this poster session, TMA is looking for projects that demonstrate the six aspects of Quality Care as defined by the Institute of Medicine.

- Safe - avoids injuries to patients from care that is intended to help them
- Timely - reduces waits and delays for both those who receive care and those who give care
- Effective - based on scientific knowledge, extended to all likely to benefit, while avoiding underuse and overuse
- Equitable - provides consistent quality, without regard to personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status
- Efficient - avoids waste, including waste of equipment, supplies, ideas, and energy
- Patient centered - respects and responds to individual patient preferences, needs, and values, ensuring that patient values guide all clinical decisions

Quality Improvement (QI)

Overview: Describe 1) where the work was completed; 2) a description of the issue that includes how long the issue has been going on and the impact the issue has on the organization/facility; 3) what faculty/staff/patient groups were involved, and 4) the alignment to organizational goals.

Lung Cancer is the third most common cancer type in the United States but is the leading cause of cancer related deaths. The American Cancer Society predicted 221,000 new cases in 2015 and 158,000 related deaths. Smoking is causative in approximately 85% of lung cancer cases. The rate of adult cigarette smoking in Smith County (Tyler) is 20% with Upshur County approaching > 40%.



The primary prevention of smoking cessation success is well documented however; most deaths are former smokers who do not demonstrate the same benefit from primary prevention. Secondary prevention from lung cancer screening is needed to decrease mortality. Several large clinical trials have been conducted to demonstrate the benefits to risk of Low Dose CT Screening (LDCT) such as Mayo, PLCO, and NLST. The NLST trial was the first to demonstrate LDCT screening reduces lung cancer mortality and in a magnitude equivalent to that of screening mammography. Despite these positive implications there remain uncertainties including but not limited to cost effectiveness, psychological harm, and magnitude of over diagnosis. In 2013, the US Preventive Services Task Force recommendations for LDCT

screening were released as well as those of the Medical Society.

The screenshot shows the U.S. Preventive Services Task Force website. The main heading is "Lung Cancer: Screening" with a release date of December 2013. A "Recommendation Summary" table is displayed, showing a Grade B recommendation for annual screening with low-dose computed tomography (LDCT) in adults aged 55 to 80 years with a 30 pack-year smoking history. The table has three columns: Population, Recommendation, and Grade. The population is "Adults Aged 55-80, with a History of Smoking". The recommendation is "The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery." The grade is "B". To the right of the table is a button to "Read the Full Recommendation Statement" and a section for "Supporting Documents" including "Final Evidence Review", "Evidence Summary", and "Modeling Report", each with a PDF version link.

Grade B requires insurers and Medicare to pay for the screening without cost sharing. In November 2014, Medicare’s initial proposal was released and a final decision was released in February, 2015. The ACCP/ATS joint policy statement followed which details nine components of high-quality lung cancer screening programs which balance the benefits to harm.

UTHSCT recognized the need to provide a high-quality lung cancer screening program to aid in early detection and treatment in a region with substantial risk. The current “developing” screening program lacked standardization for consistent delivery of all nine required program components. This lack of standardization created downstream effects of patients not referred for screening or hindered progression time toward a definitive diagnosis.

An additional group of patients for project inclusion would be those patients with incidental CT lung nodule findings. Findings are inadvertently identified while performing a CT on non-lung ordered studies. These patients, with greatest risk for advanced disease, were not systematically tracked for follow-up or also experienced the same system progression issue.

Therefore, improved identification of appropriate patients and enhanced efficiency of patient progression through the program would be the organization’s goals to prevent delay in diagnosis. This population health initiative became a high priority strategic organizational goal for 2015-2016 which impacts numerous service lines. The UTHSCT Cancer Committee, consisting of stakeholders from all service lines and departments involved in cancer care management, charged the Pulmonary, Radiology, and Pathology physician champions to prepare a charter for this program. A project charter was prepared by Dr. Fox and presented to the Performance Improvement Council for approval.

Aim Statement (2 points for each portion of SMART, with max points 10): Describe the goal of the project incorporating SMART.

- Specific – what faculty/staff/patient groups were involved and where the work was completed*
- Measureable – numerical values that define baseline and goal*
- Actionable – what solutions/interventions were implemented*
- Realistic - able to implement solutions and sustain outcomes with given constraints*
- Time bound – what date established to reach goal by*

Design a high quality Pulmonary department based Lung Nodule Screening program to increase patient screening by 15% and decrease the pathway progression time for patients with LDCT Screening or Incidental CT positive findings from CT results to Oncology referral from ≥ 40 days to target ≤ 21 days by January, 2016.

Measures of Success (5 points for describing solutions measurement and 5 points for describing outcome measurement, with max points 10): *Describe how you measured your interventions to ensure adherence and describe how you measured your outcome.*

Process	Outcome
# patients placed in screening program	% patient increase over baseline by 15%
# patients with suspicious findings	% patients with positive findings
# days from LDCT or incidental CT findings to Oncology referral	% patients with ≤ 21 days Total QUEUE Time

Prior to securing a registry, the Nurse Navigator would enter LDCT appropriate patients into an Excel spreadsheet. Patients would be sent to the Nurse Navigator via notice from ordering providers or clinic nurses. As well, a Meditech report was created to detect patients with a LDCT Lung Nodule screening order. Any discrepancies in the referred and ordered patients would be resolved.

Tracking of LDCT patients would yield the total number of patients included in the program. The percent of patient increase would be calculated utilizing 2013 & 2014 patients as baseline compared to 2015 plus through Jan 21st number of patients. **Increase = New Number - Original Number then % increase = Increase ÷ Original Number × 100.**

To capture suspicious CT finding patients, the radiologist would send an email alert to the lead program pulmonologist. The pulmonologist would collaborate with the nurse navigator regarding adding the patient to an excel spreadsheet for Incidental Findings. These patients would then flow thru the “from suspicious findings” to oncology office visit as pertinent in the same manner as the LDCT screening patients.

The excel spreadsheets would contain columns for non-value added time between steps in the diagnostic pathway. Definitions for each of these was prepared and numbered as distinct durations. A Value Stream Map would reflect the difference in baseline and implementation queue time. Queue time is defined as time that is taken waiting for work to be done or completed or before a result is achieved.

Use of Quality Tools (5 points for appropriate tools utilized during each PDSA phase, with max points 20): *What quality tools did you use to identify and monitor progress and solve the problem? Provide sample QI tools, such as fishbone diagram or process map, and identify which phase of the PDSA cycle each tool was utilized in. Note tools here and send as addendum with abstract form.*

Process mapping was performed to identify problems and develop the problem statement. The current state process map for both LDCT and incidental CT findings were separately diagramed. These maps were utilized to demonstrate opportunities for redesign to ensure compliance with all nine program components. [\(Appendix #1 Lung Nodule Screening Program Process Flow\)](#) [\(Appendix #2 Incidental Lung Nodule Findings on CT Process Flow\)](#)

Once the process maps were constructed a run chart was created for baseline total LDCT screening patients. The total number of patients for both 2013 and 2014 was only 28 patients, based on available data. No records were available for total number of Incidental patients tracked during the baseline.

A fishbone diagram [\(Appendix #3 Fishbone Diagram\)](#) analysis revealed root causes to be addressed in the implementation phase of the project. Allowing for procedural growth, the block schedule for diagnostics would be necessary to accommodate patient demand. To meet this demand, a staff vs. room availability solution would be necessary. Automation of the tracking system via a registry would ensure standardization of the process to capture all required data elements for structured reporting and confirming quality. Construction of a CMS compliant LDCT ordering

and documentation template in the EMR would be priority to only screen appropriate patients with shared decision making provided. Hiring of a Nurse Navigator to manage patients via the registry would safeguard timely progression of patients through the screening, follow-up, diagnostic, and final diagnosis process.

Offsite contracted pathology services presented challenge secondary to non-use of UT Health Northeast EMR for final reporting of results. The initial resulting time was a mean of 8 days. Opportunities to streamline and expedite specimen results reporting and documentation would be identified.

Interventions (max points 15 includes points for innovation): *What was your overall improvement plan (include interventions and identify quick wins)? How did you implement the proposed change? Who was involved in implementing the change? How did you communicate the change to all key stakeholders? What was the timeline for the change? Describe any features you feel were especially innovative.*

Strategy for intervention implementation required development of the infrastructure that would support our high-risk population. Part of this infrastructure exhibited initially in the development of a multidisciplinary team, where medical staff from thoracic surgery, radiology, pathology, medical oncology, radiation oncology and pulmonary, are asked to assess patient's diagnostic examinations and guide appropriate management. Additional staff members were from healthcare quality, lab, radiology, nursing, and a nurse navigator.

An innovative combination of the *Advisory Council* LDCT Screening Program business plan with the nine essential program components, endorsed by The American College of Chest Physicians and American Thoracic Society Policy Statement (October 2014), was planned to serve as the program implementation framework. (Appendix #4 Project Intervention Timeline)

The multidisciplinary team met on a regular basis to review progress toward completion of required elements. The block time issue was addressed and staffs were made available to accommodate procedural requests requiring limited team focus. Automation of a CMS compliant EMR template was piloted by Dr. Fox prior to spread to other physicians. Physicians from multiple disciplines were educated on the template use and program requirements at various forums.

The nurse navigator addressed patient education requirements and created a comprehensive brochure provided to patients upon request and placed in the pulmonary clinic. All nurses in the pulmonary clinic were in-serviced regarding the program process flow and patient education materials. The nurse navigator took on the onerous task of manual tracking of patients in EXCEL until the registry could be implemented. She was successful in reaching out to patient's overdue screening follow up. As well, she provided education to other clinic nurses regarding referred patients to the pulmonary clinic for appropriate LDCT Screening Program patient management.

Dr. Fox and Dr. Willis collaborated to ensure incidental patients were identified and provided with consultation and diagnostics as relevant. The nurse navigator created a separate EXCEL spreadsheet for these patients. This system substantiated the inadequacy of manual tracking and validated the need for a radiology system to automatically flag these patients, preventing a delay in diagnosis. The targeted registry would correct this deficit.

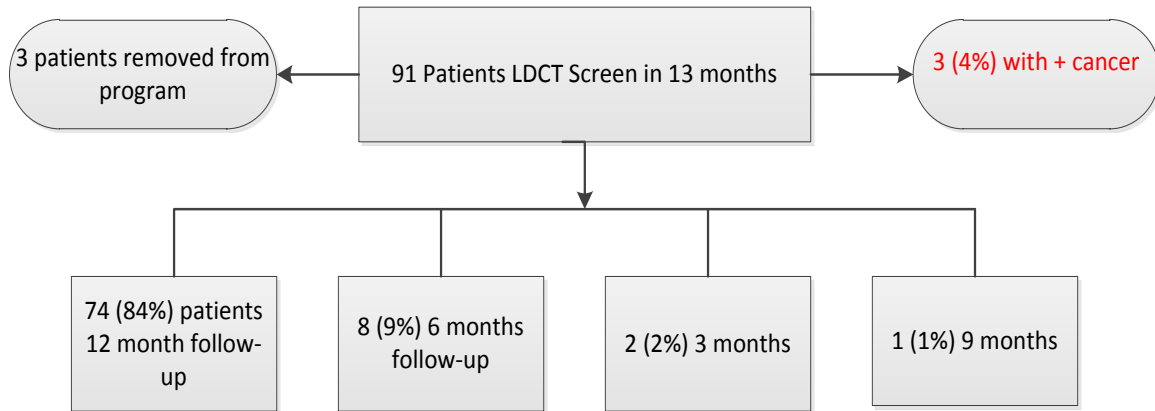
The bronchoscopy specimen processing turn-around-time was addressed with the lead cytotechnologist, laboratory manager, and pathologist. A spaghetti diagram of specimen processing provided visual of inefficient work cell layout and need for 5S of the area. However, the greatest contributing factor to historical delay was vacancy of a cytotechnologist; hired at the inception of the project. The resulting issue was addressed at the off-site contracted pathology office. Although use of the UT EMR was not an option, an expedited resulting flow was discussed.

Results (max points 25): *Include all results, using control charts, graphs or tables as appropriate. Charts and graphs must be appropriately labeled or points will be deducted. Note charts, graphs and tables here and send as addendum with abstract form.*

The LDCT screening program aim of 15% increase in screenings was exceeded by reaching **225% growth!** (Appendix #5 LDCT Screenings – run chart)

The LDCT screening program screened 91 patients in 13 months. The rate of positive or clinically significant findings in this patient population (9%) aligned with the NLST trial results of 10%. Patients needing 3-9 month f/u was 12%, this is the predicted rate of < 12 month interval. (Appendix #6 Lung Nodule Screening Program – pie to pie)

The following nodule management recommendations were made for the screened patients:



Positive findings revealed 3 confirmed cases of cancer (4%). The rate of cancer in this study compared positively to the NLST trial rate of approximately 5%. The stages of cancer for these 3 patients are IA, IIIA and IIIB.

The Incidental CT patient group is not classified using LUNG RADS; therefore the team decided it more notable to exhibit the consequence of cigarette smoking and justification for an integrated smoking cessation component. This graph also validates the urgency in secondary prevention of LDCT screening for asymptomatic patients, as most of the patients meet the criteria. This finding aligns with the NLST stats that most cancers are found in former smokers! (Appendix #7 Incidental CT Results – pie to pie)

The results are astonishing for the rate of confirmed lung cancer in a relatively small sample of patients over a 13 month time frame. The confirmed efficacy of a screening program is benchmarked against the NLST rate of 1% false positive, UTHSCT rate was 1% false positive. In addition, a 0% procedural complication rate was reported! (Appendix #8 LDCT Screenings & Incidental CT's)

For suspicious findings in the Incidental CT group, target goal of 21 days total queue duration time was attained for median days with a mean of 32 days. This was a direct result of the pilot process, physician education, hiring of the nurse navigator, and coordination with radiology, pathology and other stakeholders. The mean turn-around-time for bronchoscopy specimen final resulting decreased from 8 to 2 days. Barriers in each of the designated durations are linked to patient preference, patient compliance, payment constraints, and co-morbidities or conflicting factors taking priority prior to further assessment or treatment. Currently, contracted mobile PET scans are only performed once per week, creating non-value added queue time. (Appendix #9 INC VSM)

In the LDCT suspicious findings, secondary to a small sample size of positive cases it is premature to report a post implementation median/mean days of 21 from CT to Oncology referral. However, a run chart is provided. (Appendix #10 LDCT VSM)

Conclusions and Next Steps (max points 20): *Describe your conclusions drawn from this project and any recommendations for future work. How does this project align with organizational goals? Describe, as applicable, how you plan to move ahead with this project.*

Charges generated in excess of \$660,000 by the screening program exhibit the potential for the program to be a profitable endeavor. Additional charges to be captured consist of physician visits and smoking cessation counseling sessions. Costs associated with the program include registry fees and salary for a nurse navigator. Time associated with radiology staff performing the LDCT procedure are minimal (2 – 15 minutes).

Based on the fact Incidental CT patients continue to surface, the need to automate calculation of pack could not be dismissed. An EMR revision was completed and is under pilot in the pulmonary clinic. A future state process flow awaits implementation of the registry to determine further effect on the total queue duration time. (Appendix #11 Future State Lung Nodule Screening Program Process Flow)

Smoking cessation counseling is occurring for $\geq 90\%$ of patients in the pulmonary department. However, actual cessation rates are not available for capture in the EMR. The registry will provide a reporting location. Cessation of smoking rates of 14% - 24% reported by Mayo will be the benchmark vs. 5 -7% reported for the general population. Several studies reported higher rates in patients with positive findings, particularly if screenings overtime were positive. Further program development to include quit line is under investigation.

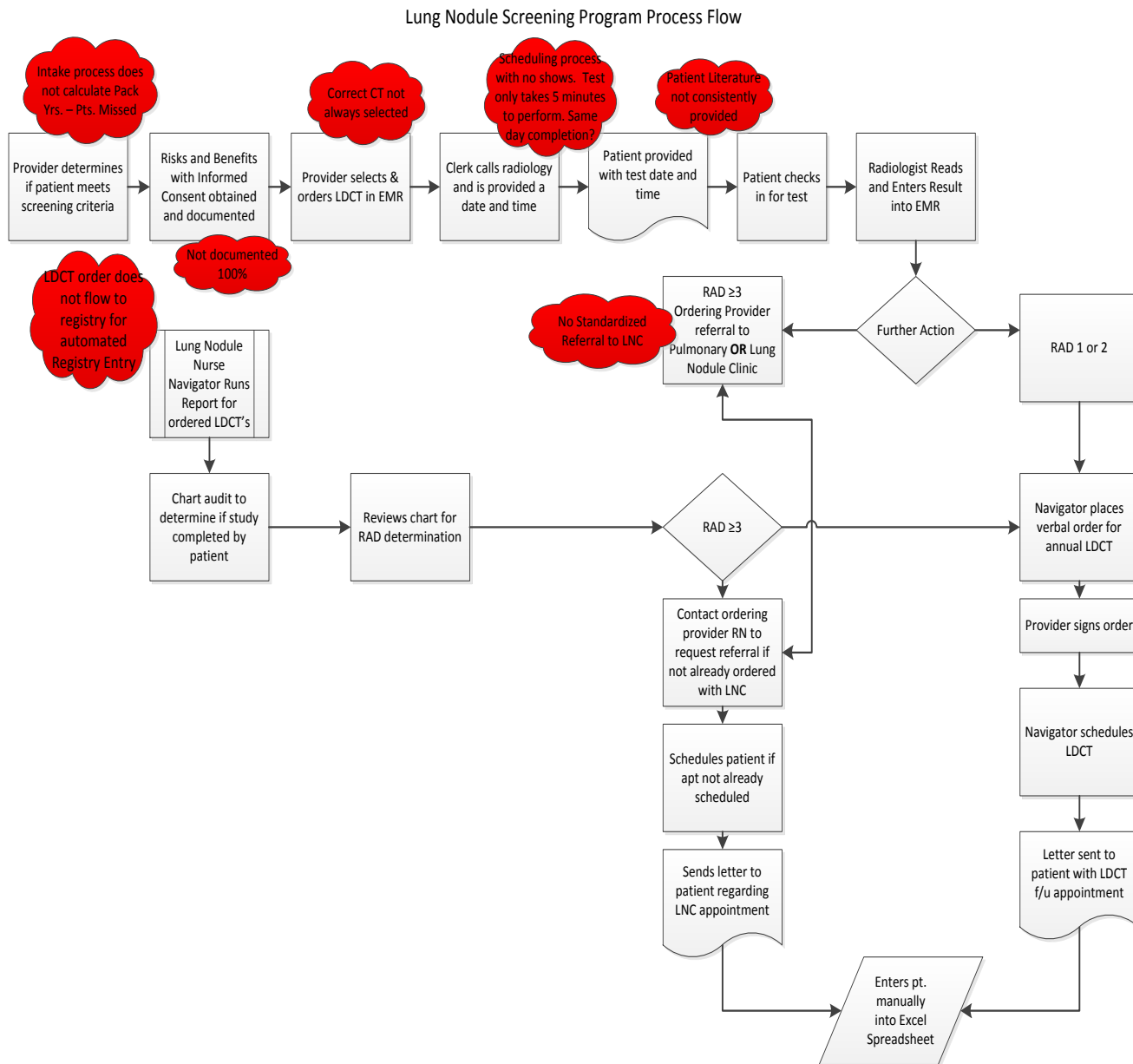
Other outcome metrics to evaluate the program will include patient reported satisfaction with the program and adherence to recommendations (recommended f/u CT's). Preliminary satisfaction results are positive but sample is <10 returned surveys. The satisfaction tool will be revised to limit the number of questions and move the survey time closer to oncology referral per patient feedback.

LDCT is a useful and effective screening tool for patients at high risk for developing lung cancer. Now that Medicare and private payers are covering the procedure, a significant number of people will be eligible for the benefit. Therefore, there is substantial opportunity to market the program to community providers. It is the desired outcome of this program to create a change package, based on literature and our experience that will facilitate screening and early diagnosis to decrease mortality as a benefit to patients in East Texas.

APPENDIX OF CHARTS, GRAPHS, ETC.

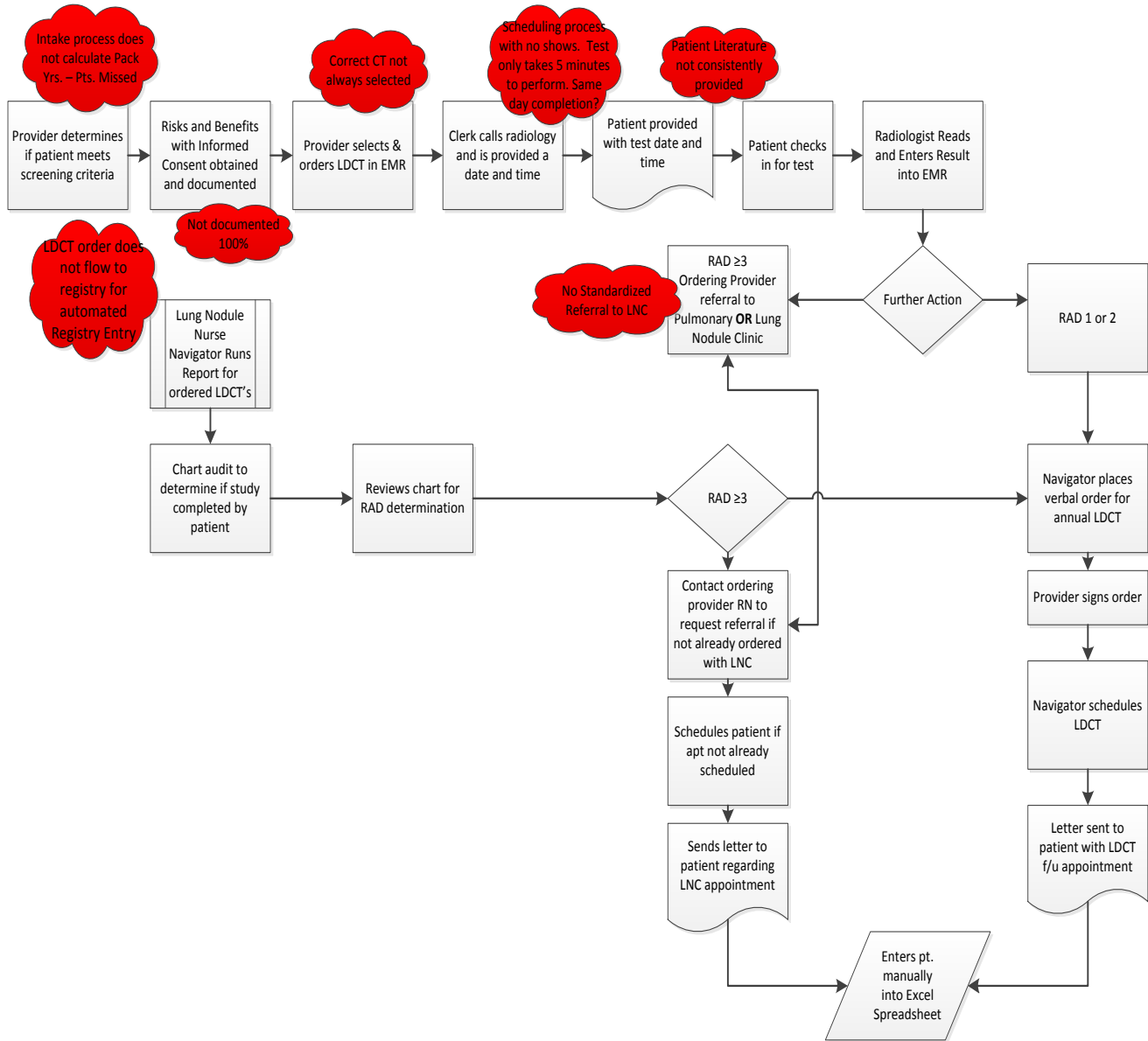
PROJECT NAME: “Tell me if I have lung cancer!” Decreasing Delay in Diagnosis for Lung Cancer Patients

(Appendix #1 Lung Nodule Screening Program Process Flow)

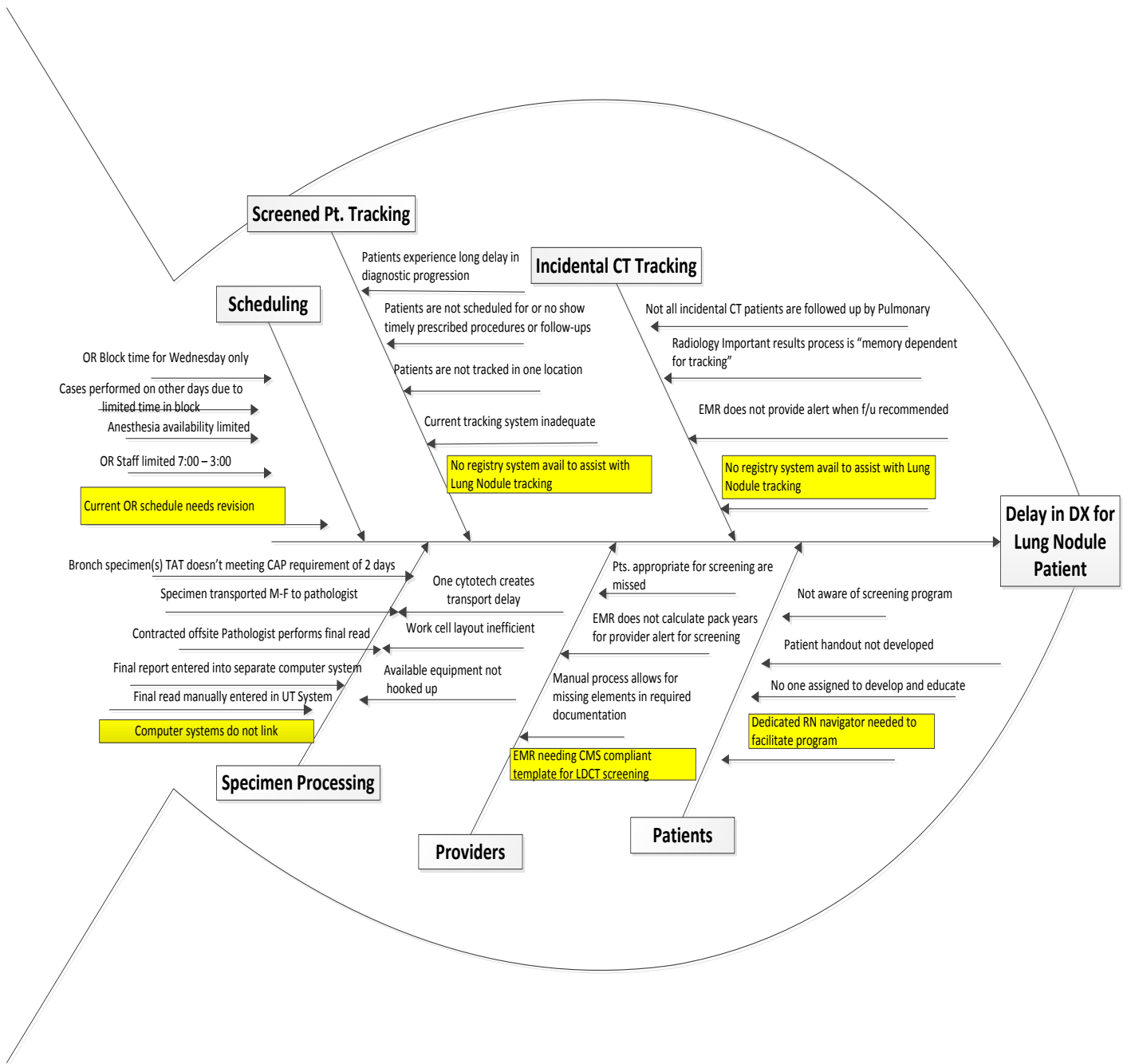


(Appendix #2 Incidental Lung Nodule Findings on CT Process Flow)

Lung Nodule Screening Program Process Flow



(Appendix #3 Fishbone Diagram)



(Appendix #4 Project Intervention Timeline)

Step 1 – Evaluate the organization’s lung screening opportunity December – March 2015	Required Tools	Responsible person(s)	Activity and Date
	Readiness Checklist	All team members	3/6/15 Review of nine program components for

			high quality program and resource requirements 3/2016 Finalize Policy/Procedure
Policy Statement – Component #5 Structured Reporting	<p>Program benchmarking tool – registry</p> <ol style="list-style-type: none"> 1. Use a structured reporting system (Lung RADS) 2. Collect data about compliance with use of structured reporting (≥90% of screen reports) 	Dr. Willis, John Davis	<p>Policy and Procedure</p> <p>3/6/15 Addressed status of obtaining Registry</p> <p>3/15 – 2/25/16 Manual tracking of patients and data reporting via EXCEL</p> <p>8/10/15, 5/20/15, 4/7/15 Invivo Demonstrations</p> <p>9/2015 Requested additional vendors prior to P.O.</p> <p>2/10/16 P.O Finalized with Invivo</p> <p>2/24/16 ACR Registry data entry start</p> <p>3/2016 Invivo CAD Registry will begin build for automation of manual functions currently performed. This will provide on-going data for program outcomes.</p>
	Program Nurse Navigator job description	Tracy Drake, Dr. Fox	<p>3/6/15 Interim Nurse assigned duties to the program</p> <p>7/10/15 Interviewed Nurse Navigator and hired</p>
	Program training agenda	Dr. Fox	1/2015 Prepared Trainings
Policy Statement – Component #7 Smoking Cessation	<p>Smoking Cessation Resource Compendium</p> <ol style="list-style-type: none"> 1. Integrated smoking cessation services 2. Data related reported on % active smoking patients offered, and who participate in, a smoking cessation intervention 	Misty Lewis Dashboard stats regarding smoking cessation	<p>Policy and Procedure</p> <p>1/1/15 Baseline for smoking cessation stats reviewed (MU/PQRS)</p> <p>9/30/15 Lung Cancer Screening flyer placed at check-in and in triage rooms, includes smoking cessation classes offered</p> <p>1/19/16 Explore grant opportunities for Quit Line</p>
	Screening program flow maps Lean Team Project (3/15 – 1/16)	Dr. Fox, Misty Lewis, Brenda Lee	<p>3/6/15 First meeting of Lean Team</p> <p>7/17/15 Lean Project Meeting</p> <p>8/7/15 Lean Project Meeting</p> <p>9/18/15 Lean Project Meeting</p> <p>On-going meetings with Process Owner and Team Lead</p>
Step 2 – Establish the right lung screening program January – August 2015	Required Tools	Responsible person(s)	Activity and Date

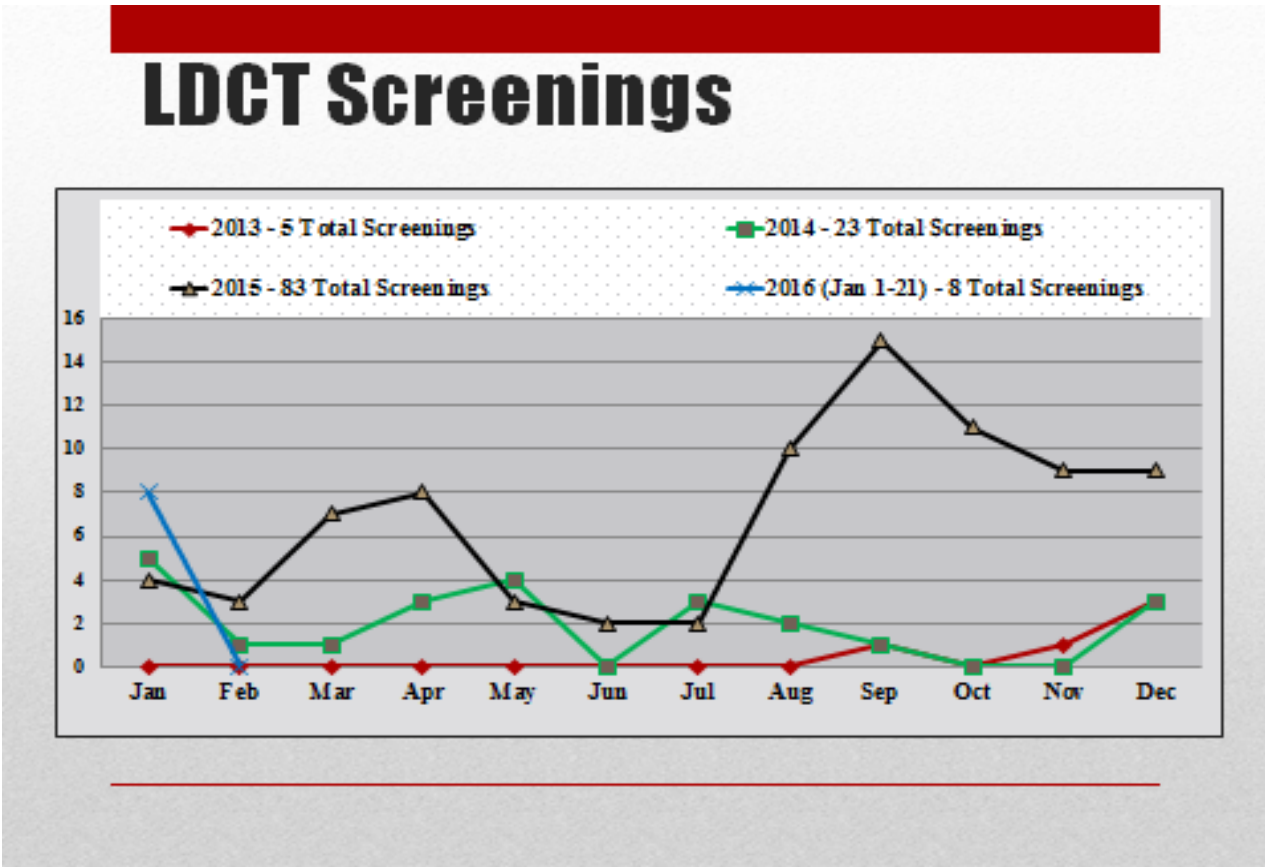
<p>1. Identifying high-risk patients</p> <p>Policy Statement – Component #1: Who is Offered Lung Cancer Screening</p>	<p>Screening criteria table based on USPSTF recommendation.</p> <p>Measure: 90% of patients must meet the criteria by recommendation</p>	<p>Dr. Fox</p>	<p>Policy and Procedure</p> <p>8/17/15 EMR Template created for documentation of required elements</p> <p>Pilot per Dr. Fox prior to expansion to Family Medicine</p> <p>4/24/15 Lung Cancer Screening – What are the Facts flyer for Doctors at Cancer Conference</p> <p>8/21/15 System wide email to all staff on CT Cancer Screening criteria and how to order screening</p> <p>9/23/15 Slide presentation for Doctors on Lung Cancer Screening criteria</p>
<p>2. Educating patients</p>	<p>Screening patient intake form</p>	<p>Dr. Fox</p>	<p>9/30/15 Lung Cancer Screening flyer placed at check-in and in triage rooms, includes smoking cessation classes offered</p> <p>8/17/15, 1/29/16 meetings to have EMR Calculate Pack Yrs.</p> <p>2/22/16 Pilot of Pack Yrs. Calculation in Pulmonary Clinic</p> <p>3/15/16 Pack Yrs. Calculation spread to other clinics</p>
<p>3. Handling follow-up</p>	<p>List of high-risk ICD-10 codes for reimbursement (LDCT and Smoking Cessation)</p>	<p>Janice Lewis</p>	<p>1/16/15 Meeting with coding/billing</p> <p>2/10/16 Provided codes and related reimbursement</p>
	<p>Patient education and information materials</p>	<p>Misty Lewis</p>	<p>9/30/15 Lung Cancer Screening flyer placed at check-in and in triage rooms</p>
<p>Policy Statement – Component #2: How often and for how long</p>	<p>Test Result/Treatment Turn Around Time</p>	<p>Dr. Fox, Misty Lewis</p>	<p>3/6/15 Monitoring of pathway progression began (baseline until 8/21/15 Pilot testing of EMR templates and program component deliverables)</p> <p>8/22/15 All providers access to EMR templates and program components</p>
	<p>1. Annual Screening age 55 until age 80 years</p> <p>2. Discontinued once pt. has not smoked for 15 years or develops a health problem that substantially limits life expectancy or ability or willingness to have</p>	<p>Dr. Fox</p>	<p>Policy and Procedure</p>

<p>Policy Statement – Component #4: Lung Nodule Identification</p>	<ol style="list-style-type: none"> 1. Size and Characteristic of a nodule to be used to label the test as positive 2. Collect data: number, size, characteristics of positive tests 	<p>Dr. Fox, Dr. Willis</p>	<p>Policy and Procedure</p> <p>Ideal state process map details these requirements.</p> <p>Retrospective to 2013, 2014 spreadsheets were updated, project implementation concurrent entry into spreadsheet.</p>
<p>Step 3 – Grow our lung cancer screening program volumes March 2015 – January 2016</p>	<p>Required Tools</p>	<p>Responsible person(s)</p>	<p>Activity and Date</p>
<p>Policy Statement – Component #8: Patient and Provider Education</p>	<ol style="list-style-type: none"> 1. List educational strategies used to educate providers regarding key components of lung cancer screening 2. Standardized educational materials <p>Physician Education & Marketing Stakeholders: PCP's, Cardiologists, Pulmonologists, Oncologists Goal: Raise awareness and drive volume</p> <p>Lung Cancer Screening Physician Presentation:</p> <ul style="list-style-type: none"> ▪ Lead with clinical evidence ▪ Explain eligibility criteria and how to identify appropriate patients ▪ Identify how program can assist with patient education and tracking. 	<p>Dr. Fox</p>	<p>Policy and Procedure</p> <p>12/15/15 Meeting with On-Campus Primary Care providers 2/11/15 Department of Radiology 8/21/15 Meeting with Outlying Primary Care Clinics 9/23/15 Update meeting with Primary Care Providers, spread use of template and educational materials 1/8/16 UTHSCT Grand Rounds Presentation 1/19/16 Leadership Lean Project presentation on progress 2/26/16 Submit Lean Project to UT System CS&E</p>
	<ol style="list-style-type: none"> 1. Standardized educational materials <p>Patient Education and Resources Stakeholders: Existing patients, new patients</p> <p><u>Brochure:</u> Highlight program benefits, access, patient experience Provide information regarding price and reimbursement potential Provide information regarding shared decision making</p>	<p>Misty Lewis, Janice Lewis, Dr. Fox, Dr. Willis, John Davis</p>	<p>2/3/16 Poster and Handout created and presented at Family Medicine Conference</p>

	Smoking cessation resources	Misty Lewis	9/30/2015 Lung Cancer Screening flyer placed at check-in and in triage rooms, includes smoking cessation class is offered
	Employer and Community marketing email template Stakeholders: Local employers, National employers, Community organizations (VA) Goal: Develop referral base <u>Email Marketing Template:</u> ▪ Lead with disease prevalence numbers and survival data ▪ Highlight potential cost-savings resulting from screening and early detection	Dr. Fox, Rhonda Scoby	2/6/15 Meeting with Marketing 3/13/15 Health Connection Segment Filmed 3/16/15 CBS Interview for Smoking rates in East Texas 2/7/16 Current trends in Family Practice Conference - Presentation
	Lung screening program scripting for program staff	Dr. Fox, Misty Lewis	12/8/15 Staff meeting for education regarding program and scripting 2/22/16 Follow-up education and project progress update
Step 4 – Demonstrate the value of the Lung Cancer Screening Program - January 2016 – March 2016	Required Tools	Responsible person(s)	Activity and Date
	Direct Revenue: Initial CT Provider office visits	Brenda Lee, Dr. Fox	1/22/16 Presented to Sr. Leadership at PIC meeting Will begin to capture office visits with go live of registry 3/1/16
	Downstream Revenue: Bronchoscopies, PET, referrals, etc.	Brenda Lee, Dr. Fox	1/22/16 Presented to Sr. Leadership at PIC meeting
	Cost Savings: Lives saved	Misty Lewis, Dr. Fox	11/10/2015 COC meeting powerpoint presentation with number of screenings/cancers identified 3/1/16 Place on Pulmonary service line dashboard
Step 5 – Distinguish the program February 2016 – August 2016	Required Tools	Responsible person(s)	Activity and Date
Policy Statement – Component #9 Data Collection 1. Collect data related to each component of program, outcomes of testing, cancers diagnosed, report	Registry, Dashboards, Annual Report	Dr. Fox, Dr. Willis, Misty Lewis, John Davis, Dr. Hyman, Dr. Smith, Dr. Caccatolo	Policy and Procedure
	Achieve American College Radiology (ACR)	Dr. Willis, John Davis	Aug 2016
	Achieve Lung Cancer Alliance (LCA)	Dr. Fox, Misty Lewis	Feb 2016 LCA Screening Center of Excellence Application

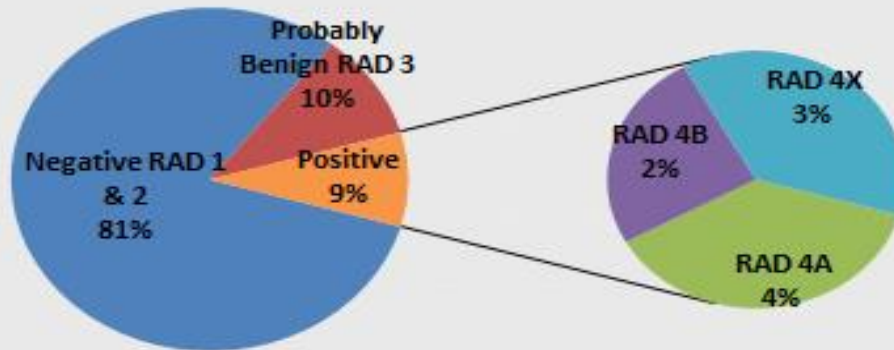
<p>annually to oversight body</p> <p>2. Maintain accreditation and respond to concerns from the oversight body regarding accreditation</p>			
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(Appendix #5 LDCT Screenings – run chart)



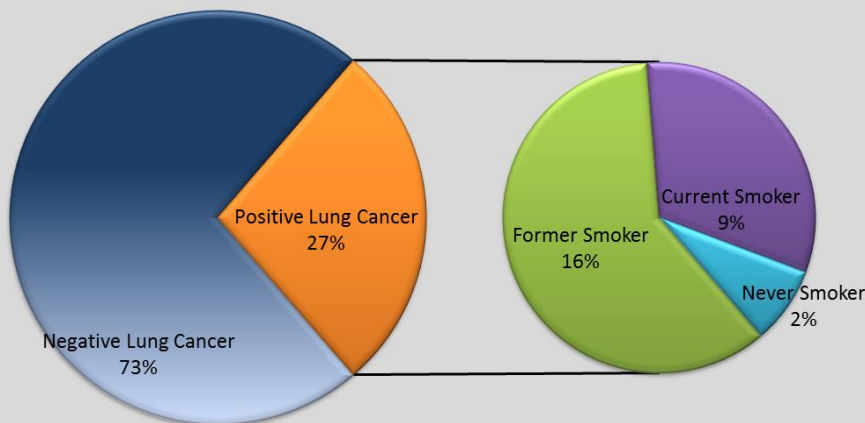
(Appendix #6 Lung Nodule Screening Program – pie to pie)

Lung Nodule Screening Program January 2015 - January 2016 (n=91)



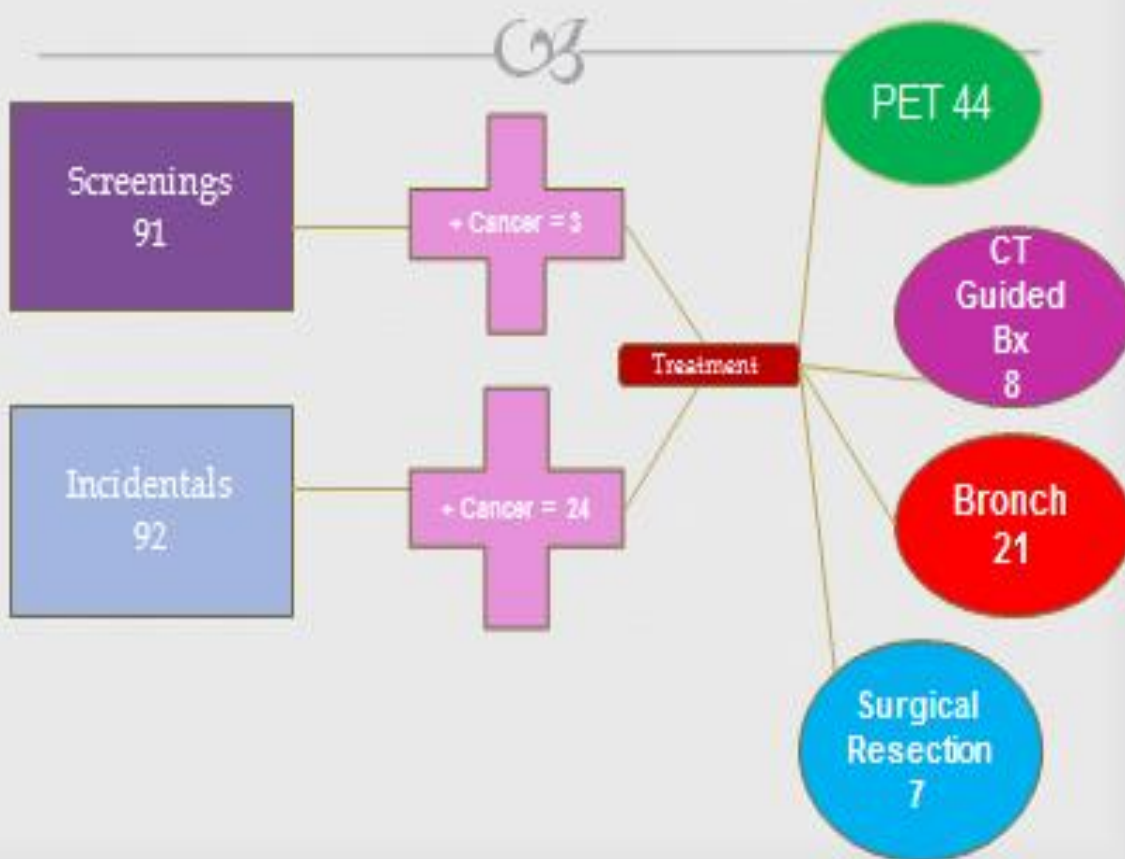
(Appendix #7 Incidental CT Results – pie to pie)

Incidental CT Scan Results January 2015 - January 2016 (n=92)



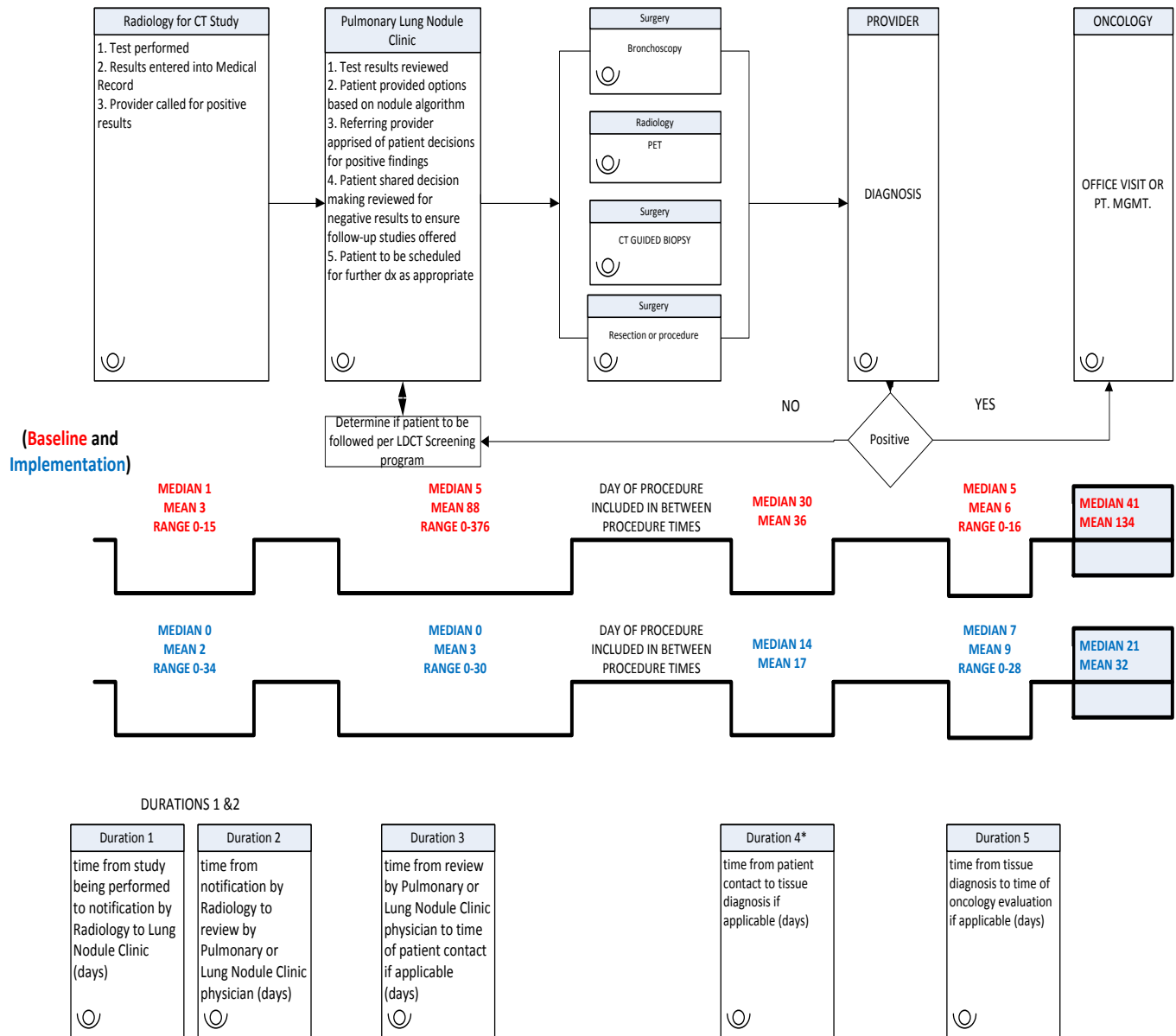
(Appendix #8 LDCT Screenings & Incidental CT's)

LDCT Screenings & Incidental CT's 2015 - 2016

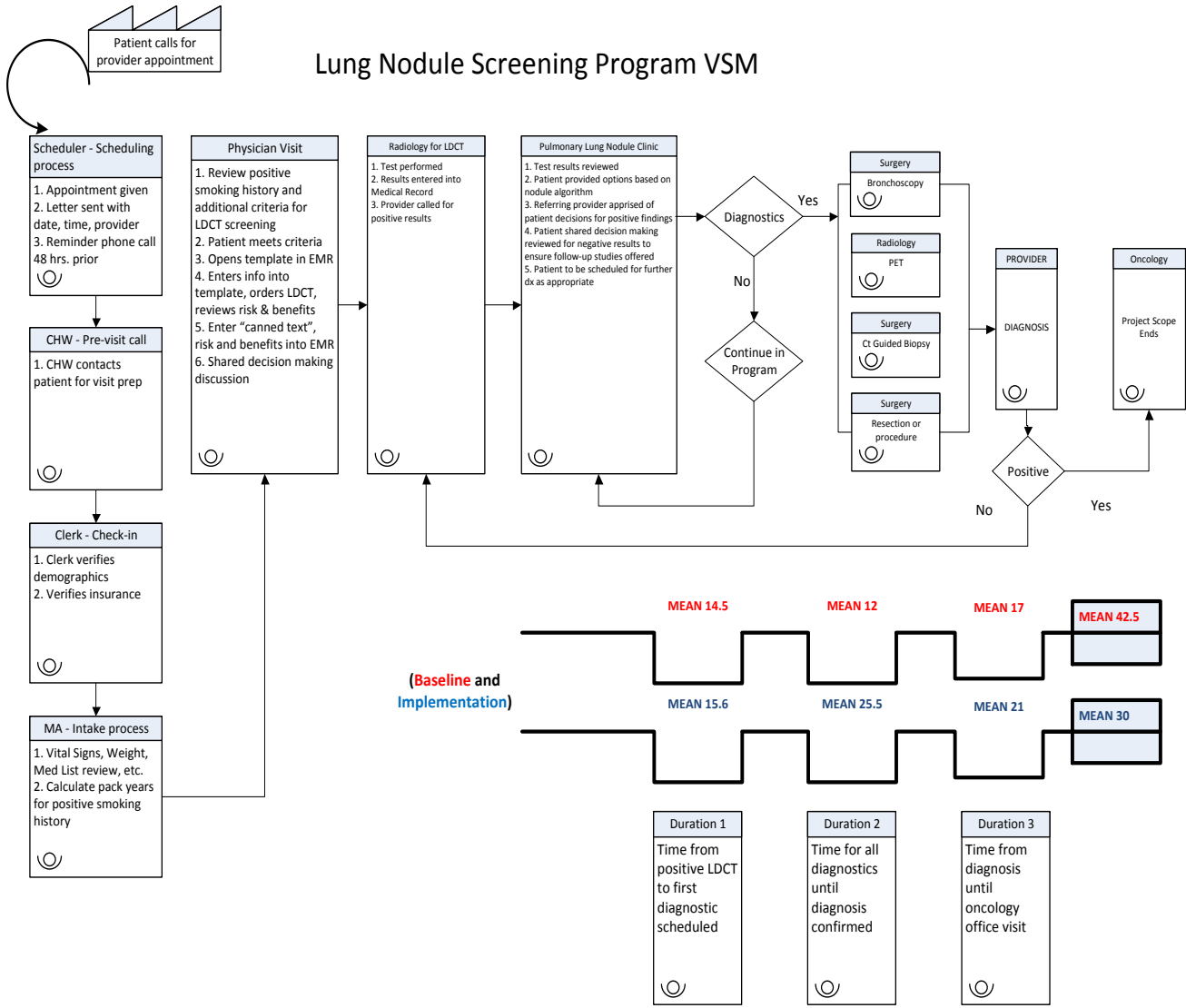


(Appendix #9 INC VSM)

VSM INCIDENTAL CT STUDY LUNG NODULE FINDINGS DIAGONSTIC PATHWAY



(Appendix #10 LDCT VSM)



(Appendix #11 Future State Lung Nodule Screening Program Process Flow)

Future State Lung Nodule Screening Program Process Flow

