

**SUNY Health Science Center at Brooklyn
Thoracic Surgery Fellowship Training Program**

PROGRAM INTRODUCTION

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A. PROGRAM BACKGROUND

Program Demographics

Sponsor Institution: SUNY Health Science Center at Brooklyn
Program Specialty: Cardiothoracic Surgery
Program Address: 450 Clarkson Avenue, Box 40, Room B8-312
Brooklyn, New York, 11203
Program Phone Number: 718-270-1981
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Program Director: Stephen Lahey, M.D., Chief, Division of Cardiothoracic Surgery
Maimonides Medical Center
Program Coordinator: Kristy Pang, RN

Program History

The cardiothoracic surgery fellowship training program of SUNY Health Science Center at Brooklyn is located in the heart of one of the country's most culturally diverse populations. The program has been in existence since 1986 and has graduated over 40 residents. The program is primarily based at three hospitals in Brooklyn:

- **SUNY Downstate Medical Center - University Hospital of Brooklyn(UHB)**
- **Kings County Hospital Center (KCHC)**
- **Maimonides Medical Center (MMC)**

Adult Cardiac Surgery (with the exception of transplantation) is performed at both UHB and MMC, while General Thoracic Surgery is performed at all hospitals, with an extra exposure to thoracic trauma surgery performed at KCHC. In the second year, the residents rotate to **North Shore Health System-Long Island Jewish Schneider's Children Hospital (LIJ)** for surgical treatment of congenital heart disease.

B. DURATION OF RESIDENCY

The residency program consists of a comprehensive two-year curriculum with one first-year (PGY-6) and one second-year (PGY-7) level resident. It offers residents with a broad and robust exposure in adult cardiac, general thoracic, and pediatric cardiac surgery. Clinical experience is derived from first-hand exposure to a broad array of complex elective and emergency cardiac and general thoracic case mix. In addition, the residents are exposed to pediatric cardiac surgery and accrue an operative case volume as required by the American Board of Thoracic Surgery for ultimate board certification.

C. PREREQUISITE TRAINING / SELECTION CRITERIA

All residents entering the cardiothoracic training program must have successfully completed a full residency in General Surgery approved by the Accreditation Council for Graduate Medical Education (ACGME) or the Royal College of Physicians and Surgeons of Canada. The resident also required to have a currently registered full and unrestricted license to practice medicine granted by a state or other United States jurisdiction. The program is a participant in the National Residency Matching Program (NRMP). The NRMP is a mechanism for matching residency applicants to programs according to the preferences expressed by both parties on their individualized rank order lists. One resident (PGY-6) is matched to the program each year through the NRMP.

D. TRAINING STRUCTURE

Below is a block diagram illustrating the sequential training program format.

BLOCK DIAGRAM

	Year 1		Year 2		
Period	6 months	6 months	2 months	5 months	5 months
Location	UHB & KCHC	Maimonides Medical Center	Schneider Children's Hospital	UHB & KCHC	Maimonides Medical Center
Service	Adult Hearts & General Thoracic	Adult Hearts & General Thoracic	Congenital Heart	Adult Hearts & General Thoracic	Adult Hearts & General Thoracic
Inpatient/ Outpatient	Inpatient evaluation & consult, Operative experience/ Outpatient pre- and post-operative care				
Additional Exposure	Level 1 Trauma at KCHC ----- Cardiology Experience: • Cath Lab • Echo • Nuclear Stress Lab & Cardiac Anesthesia (1 month) at UHB	Cath Lab 1 week		Level 1 Trauma at KCHC	

The above training sequence is subjected to change under the discretion of the program director, according to the need of the individual trainee.

E. ACGME SIX DOMAINS OF COMPETENCY

The ACGME requires all accredited GME programs to identify general competencies in six domains that must be mastered to successfully complete residency training. Programs must also establish reliable evaluation instruments that will certify resident achievement in the following domains:

- **patient care**
- **medical knowledge**
- **practice-based learning and improvement**
- **interpersonal and communication skills**
- **professionalism**
- **systems-based practice**

Residency programs must require its residents to develop the competencies in these six areas to the level expected of a new practitioner. Toward this end, programs must define the specific knowledge, skills, and attitudes required and provide educational experiences as needed in order for their residents to demonstrate the competencies.

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- provide health care services aimed at preventing health problems or maintaining health
- work with health care professionals, including those from other disciplines, to provide patient-focused care

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations

- know and apply the basic and clinically supportive sciences which are appropriate to their discipline

Practice-Based Learning and Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology
- locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems
- obtain and use information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- use information technology to manage information, access on-line medical information; and support their own education
- facilitate the learning of students and other health care professionals

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
- work effectively with others as a member or leader of a health care team or other professional group

Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices

- demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
- practice cost-effective health care and resource allocation that does not compromise quality of care
- advocate for quality patient care and assist patients in dealing with system complexities
- know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

F. GOALS AND OBJECTIVES

GOALS

The Cardiothoracic Surgery Residency at the SUNY Health Science Center at Brooklyn is dedicated to providing the cardiothoracic residents with the requisite clinical, technical and interpersonal skills he/she will need to become a competent cardiothoracic surgeon.

Additionally, the residency is designed to prepare the cardiothoracic resident with a training experience that will enable him/her to successfully complete the residency and be prepared for both the Qualifying and Certifying examinations administered by the American Board of Thoracic Surgery.

EDUCATIONAL OBJECTIVES

We require the cardiothoracic resident to meet the following critical requirements:

- ❖ The cardiothoracic resident must act with complete honesty and integrity in the treatment of patients and in research.
- ❖ The cardiothoracic resident must act in accordance with the unique responsibilities that are the foundation of the surgeon-patient relationship.
- ❖ The cardiothoracic resident must interact in a professional manner with all students, nurses and other members of the health care community.
- ❖ The Resident must demonstrate a level of surgical knowledge and Surgical skills appropriate to his or her level and the ability to apply them to patient care.
- ❖ The resident should (but not must) be able to show an innovative attitude with desire to formulate new ideas pertaining to the subject.

The Cardiothoracic Surgery Residency at the SUNY Health Science Center at Brooklyn requires the resident to develop competencies in the 6 areas listed below to the level expected of a new practitioner. Toward this end, the cardiothoracic residency defines the specific knowledge, skills, attitudes and educational experiences required in order for the resident to acquire the following competencies.

First Year – Adult General Thoracic and Cardiac Surgery - UHB / KCHC Rotation

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behavior when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.

- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decision and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health care problems or maintaining health.
- Work with health care professionals, including those from other disciplines to provide patient-focused care.

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognitive (epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic approach to clinical situations.
- Have knowledge of the basic and clinically supportive sciences which are appropriate to cardiothoracic surgery and develop the ability to apply these principles to every-day clinical care.

Operative Expectations (Cardiac) – the resident is expected to develop the skills to perform the following procedures while under close supervision:

- Median Sternotomy
- Harvest and preparation of the Internal Mammary Artery
- All methods of cardiac cannulation which includes aortic, right atrial single and bicaval cannulation, cannulation of the coronary sinus for retrograde delivery of cardioplegia
- Alternative site cannulation for complicated cardiopulmonary perfusion techniques such as femoral arterial and femoral venous cannulation and cannulation of the axillary artery
- Proximal (aortic) anastomosis and distal (coronary) anastomosis in selected, uncomplicated coronary artery bypass surgery
- Aortic valve debridement (uncomplicated)
- Aortic Valve replacement techniques (uncomplicated)
- Intraoperative techniques for the assessment of Mitral Valve competency
- Mitral Valve replacement techniques (uncomplicated)
- Surgical management of acute aortic dissection (uncomplicated)
- Surgical management of pericardial tamponade (benign and malignant pathologies)

Non-operative Expectations (Cardiac)

- Pre Operative assessment of the patient with ischemic heart disease
- Pre Operative assessment of the patient with valvular heart disease
- Pre Operative assessment of the patient with disease of the aorta and great vessels
- Interpretation of the surgical aspects of coronary angiography, includes rotation in Cardiac Catheterization Lab

- Interpretation of the surgical aspects of echocardiography
- Familiarity with certain imaging modalities as they relate to cardiac and great vessel pathology (e.g. computerized tomography and magnetic resonance imaging)
- In-depth knowledge of cardiopulmonary bypass perfusion physiology
- Post Operative assessment and management of the patient with ischemic heart disease following coronary bypass surgery
- Post Operative assessment and management of the patient with valvular heart disease following valve surgery
- Post Operative assessment and management of the patient with disease of the aorta and great vessels following surgical resection/repair
- Cardiac anesthesia management

Operative Expectations (General Thoracic) - the resident is expected to develop the skills to perform the following procedures while under close supervision:

- Tracheostomy – Open and Percutaneous
- Video Assisted Thoracoscopic Surgery
- Stapled pulmonary wedge resection
- Anatomic pulmonary wedge resection
- Pulmonary Resections including lobectomy, bilobectomy and pneumonectomy
- Esophageal resections for benign and malignant disease
- Chest wall surgery
- Gastric surgery as relates to gastroesophageal junction pathology
- Thymectomy
- Bronchoscopy (Flexible and Rigid)
- Esophagoscopy (Flexible and Rigid)
- Mediastinoscopy
- Thoracic trauma surgery

Non-operative Expectations (General Thoracic)

- Gain expertise in proper tumor staging
- Familiarity with certain imaging modalities as they relate to non-cardiac thoracic pathology (e.g. computerized tomography and magnetic resonance imaging)
- Gain experience and expertise with various surgical simulator platforms which includes Bronchoscopy and Video Assisted Thoracic Surgery

Practice-Based Learning and Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to perform the following:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- Obtain and use information about their population of patients and the larger population from which their patients are drawn.

- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and of information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information, and supplement their own education.
- Facilitate the learning of students and other health professionals.

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates. Residents are expected to develop the following:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory questioning, and writing skills. Because of the extraordinary diversity which makes up our patient population in Brooklyn, this might require frequent use of our extensive Interpretive Services.
- Work effectively with others as a member or leader of a health care team or other professional group.
- Discuss therapeutic options.
- Deliver bad news to patients and their family members.
- Present results of research projects.
- Teach other residents and medical students.

Professionalism

Residents must demonstrate a commitment to maintaining the professional responsibilities and sensitivity to a uniquely diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and families that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and ongoing professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical treatment, confidentiality of patient information, informed consent, and ethical business practices.
- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context of the system of health care. In addition, they must demonstrate an ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.

- Practice cost-effective health care and resource allocation that does not compromise the quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Know how to partner with health care managers and health care providers to assess, coordinate, improve health care and know how these activities can effect system performance.

Institution Contacts

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First Year – Adult General Thoracic and Cardiac Surgery - MMC Rotation

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behavior when interacting with patients and their families.

- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decision and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
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Medical Knowledge

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- Intraoperative techniques for the assessment of Mitral Valve competency
- Mitral Valve replacement techniques (uncomplicated)
- Surgical management of acute aortic dissection (uncomplicated)
- Surgical management of pericardial tamponade (benign and malignant pathologies)

Non-operative Expectations (Cardiac)

- Pre Operative assessment of the patient with ischemic heart disease

- Pre Operative assessment of the patient with valvular heart disease
- Pre Operative assessment of the patient with disease of the aorta and great vessels
- Interpretation of the surgical aspects of coronary angiography
 - Includes rotation in Cardiac Catheterization Lab
- Interpretation of the surgical aspects of echocardiography
- Familiarity with certain imaging modalities as they relate to cardiac and great vessel pathology (e.g. computerized tomography and magnetic resonance imaging)
- In-depth knowledge of cardiopulmonary bypass perfusion physiology
- Post Operative assessment and management of the patient with ischemic heart disease following coronary bypass surgery
- Post Operative assessment and management of the patient with valvular heart disease following valve surgery
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- Mediastinoscopy

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Second Year – Adult General Thoracic and Cardiac Surgery - UHB / KCHC Rotation

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Operative Expectations (Cardiac) – in addition to refining those skills learned in the first year of the residency program, the second-resident will be expected to master those skills which will allow him/her to perform the following procedures under close supervision by the attending faculty:

- Off-Pump coronary artery bypass surgery
- Principles of Mitral Valve repair
- More complicated techniques for surgery on the Aorta and great vessels as seen with more complex aortic aneurysms and dissections
- Exposure to techniques of minimally invasive valve surgery

Non-operative Expectations (Cardiac)

- Through the daily management of the cardiac surgical team, which includes rotating surgical residents, nurse practitioners and physician assistants, the cardiothoracic

surgery resident gains valuable experience in complex decision making and moves closer to eventual independent practice.

Operative Experience (Thoracic) – in addition to refining those skills learned in the first year of the residency program, the second-resident will be expected to master those skills which will allow him/her to perform the following procedures under close supervision by the attending faculty:

- Complex pulmonary resections including sleeve lobectomy and sleeve pneumonectomy
- Tracheal resections

Practice-Based Learning and Improvement

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Systems-Based Practice

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Mina Braga

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Second Year – Adult General Thoracic and Cardiac Surgery - MMC Rotation

Patient Care

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- Counsel and educate patients and their families.
- Use information technology to support patient care decision and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health care problems or maintaining health.
- Work with health care professionals, including those from other disciplines to provide patient-focused care.

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognitive (epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic approach to clinical situations.

- Have knowledge of the basic and clinically supportive sciences which are appropriate to cardiothoracic surgery and develop the ability to apply these principles to every-day clinical care.

Operative Expectations (Cardiac) – in addition to refining those skills learned in the first year of the residency program, the second-resident will be expected to master those skills which will allow him/her to perform the following procedures under close supervision by the attending faculty:

- Off-Pump coronary artery bypass surgery
- Principles of Mitral Valve repair
- More complicated techniques for surgery on the Aorta and great vessels as seen with more complex aortic aneurysms and dissections
- Exposure to techniques of minimally invasive valve surgery

Non-operative Expectations (Cardiac)

- Through the daily management of the cardiac surgical team, which includes rotating surgical residents, nurse practitioners and physician assistants, the cardiothoracic surgery resident gains valuable experience in complex decision making and moves closer to eventual independent practice.

Operative Experience (Thoracic) – in addition to refining those skills learned in the first year of the residency program, the second-resident will be expected to master those skills which will allow him/her to perform the following procedures under close supervision by the attending faculty:

- Complex pulmonary resections including sleeve lobectomy and sleeve pneumonectomy
- Tracheal resections

Practice-Based Learning and Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to perform the following:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- Obtain and use information about their population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and of information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information, and supplement their own education.
- Facilitate the learning of students and other health professionals.

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates. Residents are expected to develop the following:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory questioning, and writing skills. Because of the extraordinary diversity which makes up our patient population in Brooklyn, this might require frequent use of our extensive Interpretive Services.
- Work effectively with others as a member or leader of a health care team or other professional group.
- Discuss therapeutic options.
- Deliver bad news to patients and their family members.
- Present results of research projects.
- Teach other residents and medical students.

Professionalism

Residents must demonstrate a commitment to maintaining the professional responsibilities and sensitivity to a uniquely diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and families that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and ongoing professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical treatment, confidentiality of patient information, informed consent, and ethical business practices.
- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context of the system of health care. In addition, they must demonstrate an ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise the quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.

- Know how to partner with health care managers and health care providers to assess, coordinate, improve health care and know how these activities can effect system performance.

Institution Contacts

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Maimonides Medical Center
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Second Year – Congenital Heart Disease - Schneiders Children’s Hospital (LIJ) Rotation

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behavior when interacting with patients and their families.

- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decision and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health care problems or maintaining health.
- Work with health care professionals, including those from other disciplines to provide patient-focused care.

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognitive (epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic approach to clinical situations.
- Have knowledge of the basic and clinically supportive sciences which are appropriate to cardiothoracic surgery and develop the ability to apply these principles to every-day clinical care.

Operative Expectations - the resident is expected to development skills to perform the following procedures while under close supervision:

- Non-complex pediatric cardiac surgery including ligation of Patent Ductus Arteriosus, repair of Atrial Septal Defect and possibly repair of Ventricular Septal Defect
- Exposure to complex pediatric cardiac surgery including repair of AV Canal defects, repair of Tetralogy of Fallot, repair of Hypoplastic Left Heart defects, repair of Total or Partial Anomalous Venous Return, etc.
- Exposure to and training in the surgical management of a variety of congenital pulmonary and esophageal pathologic defects

Non-operative Expectations

- Under the close supervision of the attending Cardiac Surgery and Cardiology staffs, the resident will be exposed to the preoperative assessment of the pediatric patient with congenital cardiac and pulmonary defects
- Exposure to the many imaging modalities used to diagnose pediatric cardiac and thoracic disease

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Institution Contacts

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G. DIDACTIC CURRICULUM

Name of Conference	Frequency	Location	Mandatory or Elective	Organizing Individual(s) or Department
CT Surgery Work/Teaching Rounds (All Sites)	Daily	Inpatient Units	Mandatory	CT Surgery: V. Tak, MD, S. Lahey, MD, V. Parnell, MD
Cardiothoracic Surgery Educational Conference (UHB/KCHC)	Monthly	Lecture Hall 1B	Mandatory	CT Surgery: J. Burack, MD, V. Tak, MD, D. Lee, MD
CT Surgery Mortality and Morbidity Conference (UHB)	Monthly	Lecture Hall 1B	Mandatory	CT Surgery: J. Burack, MD, V. Tak, MD, D. Lee, MD
Journal Club (UHB/KCHC)	Monthly	CTICU Conference Room	Elective	CT Surgery: J. Burack, MD, V. Tak, MD, D. Lee, MD
Multidisciplinary Tumor Board (UHB)	Weekly	Radiation-Oncology Conf Room	Elective	Pathology/Radiology Dept.
Surgery Morbidity & Mortality Conference (UHB)	Weekly	Lecture Hall 1	Mandatory	Surgery Dept.: Michael Zenilman, MD
Cardiac Cath Conference (UHB)	Weekly	Cardiology Conference Room	Mandatory	Division of Cardiology
Research Conference (UHB)	Weekly	CTICU Conference Room	Elective	D. Lee, MD, J. Burack, MD, V. Tak, MD
Trauma Surgery Morbidity & Mortality (KCHC)	Weekly	Trauma Center	Elective	Trauma Surgery Division
Pulmonary Pathology Conference (KCHC)	Monthly	Radiology Conference Room	Mandatory	Pulmonary Division
Didactic Session/TSDA Core Curriculum (MMC)	Weekly	Board Room	Mandatory	CT Surgery: S. Lahey, MD
CT Surgery Chief Rounds (MMC)	Weekly	CTICU	Mandatory	CT Surgery: S. Lahey, MD
CT Surgery Mortality and Morbidity Conference (MMC)	Monthly	Saltzman Auditorium	Mandatory	CT Surgery: S. Lahey, MD
Thoracic Tumor Boards (MMC)	Weekly	Cancer Center	Elective	CT Surgery: R. Lazzaro, MD and Oncology Dept.
Surgery Morbidity & Mortality Conference (MMC)	Weekly	Saltzman Auditorium	Mandatory	Surgery Dept.: Patrick Borgen, MD
Pediatric Cardiac Surgery Didactic Teaching Conference (LIJ)	Weekly	Schneider Children's Hospital	Mandatory	Division of Pediatric Cardiothoracic Surgery
Pediatric Cardiac Morbidity & Mortality Conference (LIJ)	Monthly	Schneider Children's Hospital	Mandatory	Division of Pediatric Cardiothoracic Surgery
Pediatric Cardiac Conference (LIJ)	Weekly	Schneider Children's Hospital	Elective	Division of Pediatric Cardiology

Didactics

CT Surgery Work/Teaching Rounds (All Campuses) – Each morning, work and teaching rounds are performed on all patients on the Cardiothoracic Surgery Service. The entire surgical team is present which includes one member of the attending faculty as well as the residents, nurses and other ancillary health care staff. In addition to insuring consistency in the care of the patients, these rounds are a major educational tool for the residency. During rounds, strong emphasis is placed on professionalism, communication and interpersonal skills, practice-based learning and improvement, and systems based practice.

Educational Conference (SUNY/Downstate Campus) – Each month, residents, faculty and/or guest speakers present selected topics of interest in General Thoracic and Cardiac Surgery. Attendance at this interactive conference is mandatory.

Journal Club (SUNY/Downstate Campus) – The resident research for several current evidence based medicine journal articles pertaining to a particular clinical question/ problem. The discussion is lead by the attending faculty and a critical appraisal of each article is performed to determine if approach is applicable in patient care.

Morbidity & Mortality Conference (SUNY/Downstate Campus) – Faculty and residents monthly review all patient deaths and significant complications occurring on the Cardiothoracic Surgery Service. The resident presents the cases and opportunity is given for open discussion, and conclusions are submitted to the Department of Surgery QA. The resident is an active participant in the process, analysis of data, problem and solution of performance improvement.

Surgery Morbidity & Mortality Conference (SUNY/Downstate Campus) – The Cardiothoracic Surgery residents are encouraged to attend the General Surgery Morbidity and Mortality Conference.

Pulmonary Pathology Conference (KCH Campus) – A monthly multidisciplinary conference during which thoracic oncology cases are presented to faculty and residents on the Thoracic Surgery, Thoracic Oncology, Pulmonary Medicine, Radiation Therapy and Pathology services. Tumor staging and clinical management are discussed.

Cardiac Cath Conference (SUNY/Downstate Campus) – This weekly conference is held jointly with the faculty and fellows of the Cardiology Service during which complex and difficult clinical cases are discussed. Major emphasis is placed on interpretation of coronary angiography as well as echocardiography.

Weekly Didactic Teaching Session (MMC Campus) – This conference is based on the selected topics from the Thoracic Surgery Directors Association (TSDA) Weekly Curricula. The schedule of topics to be discussed has been published and e-mailed to the thoracic program residents and faculty directly from the TSDA. Each week, a scheduled topic is reviewed and presented by the residents. This session has also been used to review questions from the Self Education/Self-Assessment in Thoracic Surgery (SESATS) program. Resident attendance is mandatory (work hour restrictions permitting) and attendance by the faculty is strongly encouraged.

Chief Rounds (MMC Campus) – Each Thursday, the cardiothoracic surgery residents, together with general surgery residents rotating on the cardiothoracic surgery service, nurses, medical students and physician assistants, present to the faculty one or two challenging clinical problems in

the CTICU at the patient's bedside. Details of clinical management, as well as a discussion of clinical experience and review of the literature are the focus of this educational exercise.

Cardiothoracic Morbidity & Mortality Conferences (MMC Campus) – All deaths and/or complications of the previous month are listed for review, but only selected (by the resident) cases are critically discussed and reviewed. All material and ensuing discussions are protected under the provisions of confidential peer review and are electronically stored in a relational database within the Division for later analysis. Faculty and resident attendance is mandatory. Members of the Anesthesia Department, the Cardiology Department and members of the Perfusion Services also attend this meeting enthusiastically. All other interested caregivers are encouraged to attend.

Thoracic Tumor Boards (MMC Cancer Center Campus) – A weekly multi-disciplinary conference during which thoracic oncologic cases are presented to faculty and residents on the Thoracic Surgery, Thoracic Oncology, Pulmonary Medicine, Radiation Therapy and Pathology Services. Tumor staging and clinical management are discussed.

Pediatric Cardiac Surgery Teaching Conference (Northshore - LIJ Campus) – Weekly didactic conference designed to cover principles of anatomy, clinical presentation, evaluation, surgical treatment, complications and outcomes. Various faculty members present this conference to the residents of both the cardiac surgery service and the pediatric house staff.

Pediatric Cardiac Conference (North Shore - LIJ Campus) – A weekly conference during which all cases scheduled for elective surgery for the upcoming week are presented to the collective group including faculty, residents, nurses and physician assistants of the Pediatric Cardiac Surgery Service, the Cardiology Service, Critical Care and Anesthesia Staff. Strong emphasis is made on the interpretation of multiple imaging studies including echocardiography and cath/angiography in the treatment of various forms of congenital heart disease.

H. AFFILIATED PROGRAM SITES

State University of New York Downstate Medical Center

450 Clarkson Avenue
Brooklyn, New York 11203

King County Hospital Center

451 Clarkson Avenue
Brooklyn, New York 11203

Maimonides Medical Center

4802 Tenth Avenue
Brooklyn, New York 11219

North Shore Health System-Long Island Jewish, Schneider Children's Hospital

270-05 76th Avenue
New Hyde Park, New York 11040