

## Curriculum Vitae

**Date Prepared: September 2020**

**Name: Alex ChunMin Chee**

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**Work FAX:**

**Place of Birth: Kuala Lumpur, Malaysia**

### Education:

<b>Date Attended</b>	<b>Degree</b>	<b>Field of Study</b>	<b>Institution</b>
08/2000-05/2004	Medical Doctorate	Medicine	Queen's University, Canada
09/1996-05/2000	Bachelor of Science	Biophysics	Western University, Canada

### Postdoctoral Training:

<b>Date Attended</b>	<b>Title</b>	<b>Discipline</b>	<b>Institution</b>
07/2011-12/2011	Research Fellow	Optical Coherence Tomography	Massachusetts General Hospital
07/2010-06/2011	Research Fellow	Interventional Respiriology	University of Calgary
07/2009-06/2010	Clinical Fellow	Interventional Respiriology	University of Calgary
07/2007-06/2009	Clinical Fellow	Respirology	University of British Columbia
07/2004-06/2007	Resident	Internal Medicine	Queen's University

### Faculty Academic Appointments:

<b>Date</b>	<b>Title</b>	<b>Department</b>	<b>Academic Institution</b>
01/01/2019 – Present	Assistant Professor	Medicine	Harvard Medical School
05/01/2017 – 12/2016 -	Member of the Faculty Adjunct Assistant Professor(non-voting)	Medicine Medicine	Harvard Medical School University of Calgary
01/2012-11/2016	Clinical Assistant Professor	Medicine	University of Calgary

### Appointments at Hospitals/Affiliated Institutions:

<b>Date</b>	<b>Appointment</b>	<b>Department</b>	<b>Institution</b>
01/03/2020	Attending Physician	Medicine/Pulmonology	Anna Jaques Hospital
06/01/2017-	Courtesy Staff	Pulmonary and Critical Care Medicine	Massachusetts General Hospital

04/28/2017-	Attending Physician	Thoracic Surgery and Interventional Pulmonology	Beth Israel Deaconess Medical Center
03/2013-03/2017	Attending Physician	Medicine	South Health Campus
07/2010-03/2017	Attending Physician	Medicine	Foothills Medical Centre
07/2010-03/2013	Attending Physician	Medicine	Peter Lougheed Centre

### Major Administrative Leadership Positions:

#### Local

Date	Position	Institution
01/2021-present	Site Lead, Respiratory Medicine	South Health Campus
07/2018-09/2020	Director of Research, Interventional Pulmonology	Beth Israel Deaconess Medical Center
07/2018-01/2019	Director, 2019 BIDMC Updates in Interventional Pulmonology Fellows Course	Beth Israel Deaconess Medical Center
01/2018-06/2018	Co-Director, 2018 Harvard Pulmonary and Critical Care Procedure Course	Beth Israel Deaconess Medical Center
12/2016-7/2017	Co-Director, 2017 Harvard Pulmonary and Critical Care Procedure Course	Beth Israel Deaconess Medical Center
03/2013-12/2016	Director, Bronchoscopy	South Health Campus

### Committee Service:

#### Local

Years of Membership	Role, Name of Committee	Institution/Organization
12/2019-07/2020	Member, Lung Nodule Pathway Committee	Beth Israel Lahey Health
04/2019-present	Postgraduate Research Committee	Department of Surgery, Beth Israel Deaconess
06/2013-03/2017	Member, Respiriology Training Committee	University of Calgary
09/2013-12/2016	Member, Tobacco Reduction Committee	South Health Campus
01/2013-12/2016	Member, Lung Tumor Group Executive	Tom Baker Cancer Center

#### Regional

Date	Position	Site	Location
10/2020-present	President, Respiratory Section	Alberta Medical Association	Alberta, Canada
06/2012-12/2016	Member, Development of Standard Operating Procedures for Molecular Testing of Lung Cancer	Alberta Health Services	Alberta, Canada

**National**

<b>Years of Membership</b>	<b>Name of Committee</b>	<b>Institution/Organization</b>
08/2016-present	Examiner, Respiriology	Royal College of Physicians and Surgeons of Canada
08/2016-present	Examination Board	Royal College of Physicians and Surgeons of Canada

**International**

<b>Years of Membership</b>	<b>Name of Committee</b>	<b>Institution/Organization</b>
08/2018-present	Chair, Fundraising Committee	World Association of Bronchology and Interventional Pulmonology

**Professional Societies:**

<b>Date</b>	<b>Society</b>	<b>Role</b>
07/2012-present	Canadian Thoracic Society – Clinical Assembly of Chest Procedures	Member
09/2011-present	Canadian Thoracic Society	Member
01/2009-present	American Association of Bronchology and Interventional Pulmonology	Member
01/2009-present	American College of Chest Physicians	Member

**Grant Review Activities:**

2011	Physician Services Incorporated Foundation	External Peer Reviewer
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**Ad hoc Reviewer**

Local and Regional Anesthesia  
 International Journal of Computer Assisted Radiology and Surgery  
 PLOS ONE  
 Therapeutic Advances in Respiratory Disease  
 Avicenna Journal of Medicine  
 RSC Advances  
 Annals of Biomedical Engineering  
 Journal of Thoracic Diseases

**Other Editorial Activities**

<b>Date</b>	<b>Role</b>	<b>Journal</b>
03/2019-	Editorial Board Member	Journal of Thoracic Diseases

**Honors and Prizes:**

<b>Date</b>	<b>Honor, Institution</b>	<b>Achievement</b>
06/2018	Heinrich Becker Young Investigator Award for Research and Clinical Innovation	Research
12/2016	Dean's Letter of Excellence, University of Calgary	Teaching
12/2015	Dean's Letter of Excellence, University of Calgary	Teaching
12/2014	Dean's Letter of Excellence, University of Calgary	Teaching
05/2013	Hellbender Honour Roll, University of Calgary	Teaching
06/2012	Geoffrey McClennan Memorial Award for Contributions to Imaging Research, World Congress of Bronchology	Research
05/2009	Outstanding Teacher, University of British Columbia	Teaching
06/2007	Professor's Award, Queen's University	Leadership
06/2007	Outstanding Teacher, Queen's University	Teaching

**Report of Funded and Unfunded Projects****Funding Information:****Past**

<b>Date</b>	<b>Organization</b>	<b>Project</b>	<b>Value</b>
2014-2016	National Sarcoidosis Organization	Evaluation of cardiac sarcoidosis(PI)	CAN\$18,000
02/2013-05/2015	The Lung Association- Alberta and NWT	Does Bronchial Thermoplasty Result in Long-term structural changes in the airway(PI)	CAN\$30,000
05/2012-12/2015	W21C University of Calgary	Quantifying procedural performance using electromagnetic tracking of procedural instruments: a pilot study evaluating expert-novice differences(PI)	CAN\$2,070
10/2013-10/2014	American Association of Bronchology and Interventional Pulmonology	Assessment of Airway Wall Structure in Asthmatic Patients With Cryobiopsy	US\$10,000
2006-2007	Center for Research Excellence in Occupational Disease	Natural History of Flock Workers' Lung(co-Inv)	CAN\$10,000

## Current

Date	Organization	Project	Value
07/2014-06/2019	Canadian Institute of Health Research	Chronic Inflammation in Lung Disease(co-Inv)	CAN\$200,000 (co-investigator)

## Unfunded Current Projects

Date	Project
10/2018	National Survey of Pulmonary and Critical Care Fellows on Procedural Training – the Effect of Interventional Pulmonology
07/2018	Effect of Endobronchial Ultrasound on PET False Positive Rates
01/2015	Development of 3D-printed airways for bronchoscopy education(PI)

## Report of Local Teaching and Training

### Teaching of Students in Courses:

#### Undergraduate

02/16/2016	Small Group: Summary on Pleural Diseases, Small Group Instruction, University of Calgary, FMC
11/13/2015	Session 16- Class of 2016 Procedural Skills #2 -Group 17&18, Teaching Assessment, University of Calgary, Medical Skills Centre
11/13/2015	Session 16- Class of 2016 Procedural Skills #2 - Group 27&28, Teaching Assessment, University of Calgary, Medical Skills Centre
11/05/2015	UCLIC Session 3- Class of 2016 Procedural Skills #2 - Group 1&4, Teaching Assessment, University of Calgary, Medical Skills Centre
11/05/2015	UCLIC Session 3- Class of 2016 Procedural Skills #2 - Group 3&6, Teaching Assessment, University of Calgary, Medical Skills Centre
11/05/2015	UCLIC Session 3- Class of 2016 Procedural Skills #2 Group 2&5, Teaching Assessment, University of Calgary, Medical Skills Centre
10/30/2015	Session 15- Class of 2016 Procedural Skills #2 - Group 1&2, Teaching Assessment, University of Calgary, Medical Skills Centre
10/30/2015	Session 15- Class of 2016 Procedural Skills #2 - Group 9&10, Small Group Instruction, University of Calgary, Medical Skill Centre

10/16/2015 Session 14- Class of 2016  
Procedural Skills #2 - Group 25&26, Teaching Assessment, University of Calgary, Medical Skills Centre

10/16/2015 Session 14- Class of 2016  
Procedural Skills #2 - Group 19&20, Teaching Assessment, University of Calgary, Medical Skills Centre

10/02/2015 Session 13- Class of 2016  
Procedural Skills #2 - Group 11&12, Teaching Assessment, University of Calgary, Medical Skills Centre

09/18/2015 Session 12- Class of 2016  
Procedural Skills #2 - Group 31&32, Teaching Assessment, University of Calgary, Medical Skills Centre

09/18/2015 Group 23&24, Teaching Assessment, University of Calgary, Medical Skills Centre

09/04/2015 Session 11- Class of 2016  
Procedural Skills #2 - Group 7&8, Teaching Assessment, University of Calgary, Medical Skills Centre

09/04/2015 Session 11- Class of 2016  
Procedural Skills #2 - Group 15&16, Teaching Assessment, University of Calgary, Medical Skills Centre

08/21/2015 Session 10- Class of 2016  
Procedural Skills #2 - Group 29&30, Teaching Assessment, University of Calgary, Medical Skills Centre

08/21/2015 Session 10- Class of 2016  
Procedural Skills #2 - Group 21&22, Teaching Assessment, University of Calgary, Medical Skills Centre

08/07/2015 Session 9- Class of 2016  
Procedural Skills #2 - Group 13&14, Teaching Assessment, University of Calgary, Medical Skills Centre

08/07/2015 Session 9- Class of 2016  
Procedural Skills #2 - Group 5&6, Teaching Assessment, University of Calgary, Medical Skills Centre

03/03/2015 Small Group #20: Lung Nodule, Small Group Instruction, University of Calgary, FMC

02/28/2015 Small Group #19: Pleura Diseases, Small Group Instruction, University of Calgary, FMC

02/26/2015 Small Group: Summary on Pleural Diseases, Small Group Instruction, University of Calgary, FMC

02/25/2015 Small Group #16: Cough and Fever 1, Small Group Instruction, University of Calgary, FMC

02/18/2015 Undergraduate Medicine Course 3 Lecture:  
Pleural diseases, Lecture

02/04/2015 Small Group #8: Dyspnea 4, Small Group Instruction, University of Calgary, FMC

10/11/2014 Groups 3&4: Procedural Skills 2 (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

09/27/2014 Groups 31&32: Procedural Skills (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

09/13/2014 Groups 15&16: Procedural Skills (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

09/13/2014 Groups 7&8: Procedural Skills 2 (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

08/30/2014 Groups 29&30: Procedural Skills 2 (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

08/19/2014 Groups 13&14: Procedural Skills 2 (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

08/19/2014 Groups 5&6: Procedural Skills 2 (Chest Thoracentesis), Small Group Instruction, University of Calgary, FMC

07/05/2014 Mandatory - Small Group: Patient Safety II, Small Group Instruction, University of Calgary, FMC

07/01/2014 Mandatory - Small Group: Pain Management, Small Group Instruction, University of Calgary, FMC

03/23/2014 MDCN Course 3 Respiratory Clinical Core, Small Group Instruction, South Health Campus

03/05/2014 Small Group #21: Lung Nodules, Small Group Instruction, University of Calgary, FMC

03/01/2014 Small Group #20: Pleura Diseases, Small Group Instruction, University of Calgary, FMC

02/26/2014 Small Group #17: Cough and Fever 1, Small Group Instruction, University of Calgary, FMC

02/02/2014 Small Group #8: Dyspnea 3, Small Group Instruction, University of Calgary, FMC

01/29/2014 Small Group #6: Dyspnea 2, Small Group Instruction, University of Calgary, FMC

01/28/2014 Small Group #5: Dyspnea 1, Small Group Instruction, University of Calgary, FMC

11/09/2013 Groups 1&2: Procedural Skills #2, Teaching Assessment, University of Calgary, FMC

11/09/2013 Groups 9 & 10: Procedural Skills #2, Teaching Assessment, University of Calgary, FMC

03/12/2013 MDCN Course 3 Respiratory Clinical Core, Small Group Instruction, South Health Campus

03/06/2013 Small Group: Lung Nodule, Small Group Instruction, University of Calgary, FMC

02/27/2013 Small Group: Cough and Fever 2, Small Group Instruction, University of Calgary, FMC

01/30/2013 Small Group: Dyspnea 3, Small Group Instruction, University of Calgary, FMC

01/26/2013 Small Group: Dyspnea 2, Small Group Instruction, University of Calgary, FMC

01/2012 -2012 Respirology Block Clinical Correlation, Small Group Instruction, University of Calgary

#### **Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):**

09/07/2018 Chest Tube Management, Tullis Firm Conference, Beth Israel Deaconess Medical Center

08/23/2018 Lumbar Puncture and Thoracentesis Simulation Training, Beth Israel Deaconess Medical Center, Global Health Curriculum

07/24/2018 Chest tube management, Beth Israel Deaconess Medical Center, Resident noon rounds

08/04/2016 Tube thoracostomy half-day for Respirology Fellows, University of Calgary, South Health Campus

08/06/2015 Tube thoracostomy half-day for Respirology Fellows, University of Calgary, South Health Campus

12/11/2014 Interventional Pulmonary Medicine for the Radiologist, Lecture, The University of Calgary, John's Lecture Theatre

08/11/2014 Respirology Fellow Chest tube teaching - Half Day, Clinical Skills Teaching, University of Calgary, South Health Campus

09/07/2013 Bronchoscopy Training Program - Administered to residents in respirology, critical care, anesthesia, thoracic surgery, Laboratory, The University of Calgary, Health Sciences Centre, Foothills Medical Center

### Clinical Supervisory and Training Responsibilities:

06/2019 – 06/2020	Fellowship Co-Supervisor, Priya Patel, Interventional Pulmonology, BIDMC One of six faculty supervisors, > 300 hours Inova Health
06/2019 – 06/2020	Fellowship Co-Supervisor, Muhammad S Ali, Interventional Pulmonology, BIDMC One of six faculty supervisors, > 300 hours University of Michigan
06/2019 – 06/2020	Fellowship Co-Supervisor, Tanmay Panchabhai, Interventional Pulmonology, BIDMC One of six faculty supervisors, > 300 hours University Hospital, Cleveland
06/2019 – 06/2020	Fellowship Co-Supervisor, Ramsy Abdelghani, Interventional Pulmonology, BIDMC One of six faculty supervisors, > 300 hours Tulane University
11/2018—06/2019	Fellowship Co-Supervisor, Catherine Oberg, Interventional Pulmonology, BIDMC - One of three faculty supervisors, > 300 hours Assistant Professor UCLA
07/2018 – 06/2019	Fellowship Co-Supervisor, Suliman Alamro, Interventional Pulmonology, BIDMC - One of three faculty supervisors, > 300 hours
07/2018 – 06/2019	Fellowship Co-Supervisor, Jason Beattie, Interventional Pulmonology, BIDMC One of three faculty supervisors, > 300 hours Memorial Sloan Kettering
07/2017 – 06/2018	Fellowship Co-Supervisor, Christian Ghattas, Interventional Pulmonology, BIDMC - One of five faculty supervisors, > 300 hours Assistant Professor Ohio State University
07/2017 – 06/2018	Fellowship Co-Supervisor, Van Holden, Interventional Pulmonology, BIDMC One of five faculty supervisors, > 300 hours Current position: Assistant Professor University of Maryland
07/2017 – 06/2018	Fellowship Co-Supervisor, Tim Leclair, Interventional Pulmonology, BIDMC One of five faculty supervisors, > 300 hours
05/2017 -- 06/2017	Fellowship Co-Supervisor, Yaron Gesthalter, Interventional Pulmonology, BIDMC - One of three faculty fellowship supervisors, > 50 hours Current position: Assistant Professor University of California San Francisco
07/2016 – 12/2016	Fellowship Co-Supervisor, Ben Shieh, Interventional Respiriology, University of Calgary Current position: Clinical Assistant Professor McGill University
07/2015 – 12/2016	Fellowship Clinic Preceptor, Michael Braganza, Respiriology, University of Calgary
07/2015 – 06/2016	Fellowship Co-Supervisor, Fred McGovern-Murphy, Interventional Respiriology, University of Calgary Current position: Assistant Professor Universite de Sherbrooke
07/2014 – 06/2015	Fellowship Co-Supervisor, Marc Fortin, Interventional Respiriology, University of Calgary Current position: Assistant Professor University of Laval
03/2015	Clinic Co-Supervisor, Rebecca Iwanicki, Respiriology Resident Clinic, University of Calgary



09/2014 – 12/2014	Co-Supervisor, Kevin Solverson, Internal Medicine Residency Clinic, University of Calgary
12/2014	Co-Supervisor, Luke Rannelli, Internal Medicine Residency Clinic, University of Calgary
05/2014 – 06/2014	Resident Co-Supervisor, Han Phang, Inpatient Respiriology Rotation, University of Calgary
07/2013 – 06/2014	Current position: Staff Physician, Royal Jubilee Hospital, Victoria, BC, Canada Fellowship Co-Supervisor, Eve-Lea Beaudoin, Interventional Respiriology University of Calgary
07/2012 – 06/2013	Current position: Assistant Professor University of British Columbia Fellowship Co-Supervisor, Jacob Gelberg, Interventional Respiriology, University of Calgary
07/2012	Alyson McCabe, Medical Student, University of Calgary
01/2012 – 04/2012	Fellowship Co-Supervisor, Ashley Gilson, Interventional Respiriology, University of Calgary Current position: Director of Interventional Pulmonary Medicine, University of Alberta

**Laboratory and Other Research Supervisory and Training Responsibilities:**

09/2015 – 06/2018	PhD Committee Member, Arpan Neupane, Immunology, University of Calgary 5 committee meetings, PhD project mentorship, PhD defense board, > 20 hours
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**Formal Teaching of Peers (e.g., CME and other continuing education courses):**

07/11/2020	Core Updates and Essentials in Primary Care - Approach to Lung Nodules and Lung Cancer, Beth Israel Lahey Health Primary Care
12/18/2019	AABIP Postgraduate Course – Tracheal Stenosis and Tracheobronchomalacia
12/10/2016	Radon Awareness – Cancer Screening, University of Calgary
11/21/2016	41ST Annual Family Practice Review and Update Course – Lung Cancer Screening, University of Calgary
01/08/2014	Family Medicine Evening Course - Investigation and Management of Pleural Effusions, Lecture, The University of Calgary, Clara Christie Theatre, University of Calgary
02/07/2012	Annual Endobronchial Ultrasound Course, Workshops / Seminars, University of Calgary, Interventional Pulmonary Medicine Group, University of Calgary
02/10/2011	Annual Endobronchial Ultrasound Course, Workshops / Seminars, University of Calgary, Interventional Pulmonary Medicine Group, University of Calgary
11/25/2010	Approach to the Solitary Pulmonary Nodule Annual Hospital Medicine Course, Lecture, University of Calgary, Foothills Medical Centre

**Local Invited Presentations:**

**Report of Regional, National and International Invited Teaching and Presentations**

**National**

04/12/2019	Invited Speaker, American Management of Pleural Infections, Canadian Respiratory Conference, Ottawa, Canada
04/11/2019	Invited Speaker, Disruptive Innovation: Interventional Respirology in Airways Diseases, Pneumoclub, University of Ottawa, Ottawa, Canada
01/26/2019	Invited Speaker, Endoscopic Management of Subglottic Stenosis. Society of Thoracic Surgeons Annual Meeting, San Diego, California
10/31/2017	Invited Speaker, 3D Printing in Teaching and Simulation, CHEST annual meeting, Toronto, Canada
04/24/2014	Canadian Respiratory Conference - Pleural Course Lecture: Anticoagulation and Pleural Procedures, Lecture, Canadian Thoracic Society, Hyatt Regency Hotel, Calgary, Canada
10/17/2011	Invited Speaker, Therapeutic Bronchoscopy and Airway Stents, Thoracic Nurses Association of Canada - Annual Meeting, Calgary, Canada

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Board Certification:**

### **Report of Practice Activities**

2017--	Ambulatory Care	Interventional Pulmonology, Beth Israel Deaconess Medical Center	2 days of clinic, 2 days in operating room per week
2017--	Inpatient consults	Interventional Pulmonology, Beth Israel Deaconess Medical Center	18 weeks of inpatient consults per year
2013-2017	Ambulatory Care	Interventional Respirology, South Health Campus, Calgary, Canada	2 half days of clinic, 2 days in bronchoscopy suite per week
2013-2017	Inpatient ward	Respirology, South Health Campus, Calgary, Canada	8 weeks of inpatient service/call per year
2012-2013	Inpatient ward	Respirology, Foothills Medical Center & Peter Lougheed Center, Calgary, Canada	6 weeks of inpatient service/call per year
2012-2013	Ambulatory Care	Interventional Respirology, Foothills Medical Center, Calgary, Canada	2 half days of clinic, one day in bronchoscopy suite per week

### **Clinical Innovations:**

Alberta Health Services Clinical Practice Guideline, Malignant Pleural Effusions(2014)	Clinical Lead in Clinical Practice Guideline for management of malignant pleural effusion for Alberta Health Services Region. This CPG is currently used as a resource for physicians in the management in pleural effusions in Alberta
Alberta Health Services Molecular Pathology(2012-2014)	Clinical member of molecular pathology committee of Alberta Health Services – participated in streamlining of pathology flow process to aid in the molecular processing of neoplastic tissue samples

Development of  
Bronchoscopy Suite,  
South Health  
Campus(2013)

Director and Developer of Bronchoscopy Suite when new hospital, South Health Campus, was built. I led the process of bronchoscopy flow including patient flow through the system, procedure standard operating procedure development

### **Report of Teaching and Education Innovations**

3D printed airway model for rigid bronchoscope simulation. Beth Israel Deaconess Medical Center(2017-2018)

Developed soft trachea model to simulate airway obstruction for dilation and stent insertion simulation. Used in CME training courses and awards Heinrich Becker Young Investigator Award

### **Report of Technological and Other Scientific Innovations**

#### **PATENTS AND COPYRIGHTS**

1. POSITIONING DEVICE FOR MEDICAL DEVICES. Guide device for body cavity detection when inserting catheters and tubes. I designed the depth control and cavity detection systems. United States Patent, Applied, 62/447,113. 2017/01
2. OPTICAL PROBE APPARATUS, SYSTEMS, METHODS FOR GUIDING TISSUE ASSESSMENT, Optical Coherence Tomography-based imaging system to perform microscopy through needle-sized probe. I helped develop needle apparatus to apply system to bronchoscopy, United States, Patent, Applied, 61/799109, 2013/03
3. OPTICAL PROBE APPARATUS, SYSTEMS, METHODS FOR GUIDING TISSUE ASSESSMENT. Optical Coherence Tomography-based imaging system to perform microscopy through needle-sized probe. I helped develop needle apparatus to apply system to bronchoscopy, United States, Patent, Applied, 61/746752, 2012/03

### **Report of Education of Patients and Service to the Community**

*No presentations below were sponsored by outside entities*

#### **Activities:**

<b>Date</b>	<b>Presentation</b>	<b>Group</b>
02/2016	Research of Inflammatory Lung Disease	IPF Canada Support Group, Calgary Chapter

### **Report of Scholarship**

**Peer reviewed scholarship in print or other media:**

#### **Research Investigations**

1. Characterization of Applied Forces and Torques During Rigid Bronchoscopy Intubation. Louis-Xavier Barrette, Melih Turkseven, Suvranu De, Adnan Majid, Mihir Parikh, **Alex Chee**. Journal of Bronchology & Interventional Pulmonology. 2020. *In press*

2. Safety and Efficacy of the Tracheobronchial Bonastent: A Single-Center Case Series. Daniel Ospina-Delgado, **Alex Chee**, Mihir S Parikh, Megan M Carreiro, Daniel Alape Moya, Sebastian Fernandez-Bussy, Felix JF Herth, Adnan Majid. *Respiration*. *In press*
3. Early Readmission to Hospital in Patients With Cancer With Malignant Pleural Effusions: Analysis of the Nationwide Readmissions Database. Michael A Mitchell, Inderdeep Dhaliwal, Sunita Mulpuru, Kayvan Amjadi, **Alex Chee**. *Chest*. 2020. 157 (2), 435-445
4. Combined Thoracoscopic Surgical Stapling and Endobronchial Valve Placement For Lung Volume Reduction With Incomplete Lobar Fissures: An Experimental Pilot Animal Study. Adnan Majid, Fayez Kheir, Daniel Alape, **Alex Chee**, Mihir Parikh, Lauri DeVore, Alexis Agnew, Sidhu Gangadharan. *Journal of bronchology & interventional pulmonology*. *Journal of Bronchology & Interventional Pulmonology*. 2020. 27 (2), 128-134
5. Tunneled Pleural Catheters for Patients With Chronic Pleural Infection and Nonexpandable Lung. Adnan Majid, Andres de Lima, Mihir Parikh, **Alex Chee**, Sebastian Fernandez-Bussy, Fayez Kheir. *Journal of bronchology & interventional pulmonology*. 2019. 26(2):132-136
6. Quantitative assessment of airway remodelling and response to allergen in asthma. David C Adams, Alyssa J Miller, Matthew B Applegate, Josalyn L Cho, Daniel L Hamilos, **Alex Chee**, Jasmin A Holz, Margit V Szabari, Lida P Hariri, R Scott Harris, Jason W Griffith, Andrew D Luster, Benjamin D Medoff, Melissa J Suter. *Respirology*. 2019. Epub ahead of print
7. Assessment of Fissure Integrity in Patients With Intrabronchial Valves for Treatment of Prolonged Air Leak. Adnan Majid, Fayez Kheir, Melibea Sierra-Ruiz, Christian Ghattas, Mihir Parikh, Colleen Channick, Colleen Keyes, **Alex Chee**, Sebastian Fernandez-Bussy, Sidhu Gangadharan, Erik Folch. *The Annals of Thoracic Surgery*. 2019. 107(2):407-411
8. Endobronchial Ultrasound-guided Transbronchial Needle Aspiration With a 19-G Needle Device. Alain Tremblay, Seamus McFadden, Martina Bonifazi, Valentina Luzzi, Samuel V Kemp, Stefano Gasparini, **Alex Chee**, Paul MacEachern, Elaine Dumoulin, PL Shah. *Journal of bronchology & interventional pulmonology*. 2018. 25(3):218-223
9. Concurrent Versus Sequential Intrapleural Instillation of Tissue Plasminogen Activator and Deoxyribonuclease for Pleural Infection. Fayez Kheir, George Cheng, Estefania Rivera, Alejandro Folch, Erik Folch, Sebastian Fernandez-Bussy, Colleen Keyes, Mihir Parikh, Colleen Channick, **Alex Chee**, Adnan Majid. *Journal of bronchology & interventional pulmonology*. 2018. 25(2):125-131
10. Sarcoidosis With Pleural Effusion as the Presenting Symptom. Estefania Rivera, Yaron Gesthalter, Paul Vardelaan, **Alex Chee**, Adnan Majid. *Journal of bronchology & interventional pulmonology*. 2018. 25(2):148-151
11. Radiologist initiated specialty referral for patients suspected of having a thoracic malignancy Alain Tremblay, Nadine Strilchuk, Niloofar Taghizadeh, Marc Fortin, Paul Burrowes, Laura Hampton, **Alex Chee**, Paul MacEachern, Rommy Koetzler, Sean McFadden. *Canadian Journal of Respiratory, Critical Care, and Sleep Medicine*. 2017. 10:180-185
12. Lesion heterogeneity and risk of infectious complications following peripheral endobronchial ultrasound. Marc Fortin, Niloofar Taghizadeh, **Alex Chee**, Christopher A Hergott, Elaine Dumoulin, Alain Tremblay, Paul MacEachern. *Respirology*. 2017. 22(3):521-526
13. A Series of Transbronchial Removal of Intracavitary Pulmonary Aspergilloma. David R Stather, Alain Tremblay, Elaine Dumoulin, Paul MacEachern, **Alex Chee**, Christopher Hergott, Jacob Gelberg, Gary A Gelfand, Paul Burrowes, John H MacGregor, Christopher H Mody. *The Annals of thoracic surgery*. 2017. 103(3):945-950
14. Severe Complications of Ultrasound Guided Transbronchial Needle Aspiration—A Case Series and Review of the Literature. C Giesa, L Heining, E Hecker, S Ewig, G Goeckenjan, H Sitter, M Thomas, GA Silvestri, AV Gonzalez, MA Jantz, P Gu, YZ Zhao, LY Jiang, K Adams, PL Shah, L Edmonds, L Varela-Lema, A Fernandez-Villar, A Ruano-Ravina, K Yasufuku, A Pierre, G Darling, S Dhooria, AN Aggarwal, D Gupta, F Asano, M Aoe, Y Ohsaki, GA Eapen, AM Shah, X Lei, MB von Bartheld, JT Annema, N Motas, C Motas, D Achim, F Gochi, F Chen, A Aoyama, N Kurimoto, T Shinmyo, R Tagay, SC Leong, HM Marshall, M Bint, CT Huang, CY Chen, CC Ho, SD Moffatt-Bruce, P Ross, KL Parker, CS Bizakis, MD Zervos, F McGovern Murphy, B Grondin-Beaudoin, Y Poulin, AR Haas, SK Epstein, CJ Winslow, SM Brecher, A Tachjian, KM Shafer, C Denking, HY

- Lee, J Kim, YS Jo, A Gamrekeli, G Kalweit, H Schäfer, KP Wang, R Brower, EF Haponik, RF Kucera, GK Wolfe, ME Perry, M Botana-Rial, M Nunez-Delgado, A Pallares-Sanmartin, L Lazzari Agli, R Trisolini, M Burzi, M Evison, PA Crosbie, J Martin, DR Stather, P Maceachern, **A Chee**, S Okachi, N Imai, K Imaizumi, S Giri, R Pathak, V Yarlagadda, DP Steinfort, DF Johnson, LB Irving. *Pneumologie*. 2016. 70(1):23-27
15. Intrapleural Fibrinolysis for the Treatment of Indwelling Pleural Catheter-Related Symptomatic Loculations: A Multicenter Observational Study. Rajesh Thomas, Francesco Piccolo, Daniel Miller, Paul R MacEachern, **Alex C Chee**, Taha Huseini, Lonny Yarmus, Rahul Bhatnagar, Hans J Lee, David Feller-Kopman, Nick A Maskell, Alain Tremblay, YC Gary Lee. *Chest*. 2015. 148(3):746-751
  16. Self-expandable metallic stents in nonmalignant large airway disease. Marc Fortin, Paul MacEachern, Christopher A Hergott, **Alex Chee**, Elaine Dumoulin, Alain Tremblay. *Canadian Respiratory Journal*. 2015. 22(4):235-236
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### Proceedings of meetings or other non-peer reviewed scholarship

1. 3-D Printing for Medical Uses **Alex Chee**. *IEEE New York Monitor*. 2018;65(7):11-21
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### Reviews, chapters, monographs and editorials

1. Tunnelled Pleural Catheters. **Alex Chee**, Paul MacEachern, David R Stather, Alain Tremblay. *Textbook of Pleural Diseases, Third Editioned*. Richard Light, Gary Lee. Jan 22, 2016
2. Interventional Pulmonology: an update for internal medicine physicians. Eve-Lea Beaudoin, **Alex Chee**, David Stather. *Minerva Medica* [2014, 105(3):197-209]
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### Case reports

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### Letters to the Editor

1. M Diane Lougheed, Scott E Turcotte, **Alex Chee**, Ronald Walsh, F Curry Grant, Gary M Liss, Alexander H Boag, Lutz Forkert. The Natural History of Flock Worker's Lung Response. *CHEST / 145 / 1 / JANUARY 2014* 185 Letter to the editor response

### Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

- 05/21/2019 Poster Discussion, An International Survey on the Use of Intrapleural Fibrinolytics for Complicated Parapneumonic Effusions and Empyemas, American Thoracic Society, Dallas, TX
- 05/19/2019 Poster Discussion, The Effect of Interventional Pulmonology on the Training of Pulmonary and Critical Care Fellows, American Thoracic Society, Dallas, TX
- 06/12/2018 Poster, Comparison of 3D printed stenotic airway models versus standard model for bronchoscopy training – a proof of concept, World Congress of Bronchology and Interventional Pulmonology, Rochester, MN
- 06/12/2018 Poster, Measurement of Rigid Bronchoscopy Intubation Forces, World Congress of Bronchology and Interventional Pulmonology, Rochester, MN
- 04/14/2018 Poster, Feasibility of a Customized CPAP Mask for Obstructive Sleep Apnea Using 3D Image Capture and Printing, Canadian Respiratory Conference, Vancouver, Canada
- 05/11/2016 Podium, Altered Airway Histology in Asthma Patients after Bronchial Thermoplasty, World Congress of Bronchology and Interventional Pulmonology, Florence, Italy
- 10/01/2015 Poster, Assessment of Airway Wall Structure in Asthmatic Patients With Cryobiopsy, Chest, Montreal, Quebec, Canada
- 04/16/2014 Poster, Cytology Specimens vs Biopsy are more than adequate for EGFR mutation analysis, World Congress of Bronchology and Interventional Pulmonology, Kyoto, Japan
- 06/2012 Poster, Optical Detection and Diagnosis of Peripheral Pulmonary Lesions, World Congress of Bronchology and Interventional Pulmonology, Cleveland, Ohio, United States
- 10/2011 Poster, Bronchoscopy Approach to the Peripheral Lung Nodule – An Alternative Approach Using Peripheral Endobronchial Ultrasonography and Electromagnetic Navigation Bronchoscopy, Chest, Honolulu, Hawaii
- 10/2011 Poster, Cytologic Assessment of Transbronchial Needles Aspirates in Sarcoidosis, Chest, Honolulu, Hawaii

**Narrative Report**

As an Interventional Pulmonologist, I treat patients with lung cancer, pleural and airway diseases and spend my academic time developing innovations in procedural technology and education. Although I have attained early success in the development of bronchoscopic imaging, I have a passion to increase the body of education knowledge in interventional pulmonary medicine.

My professional expertise is in the use of advanced bronchoscopic techniques to aid in the diagnosis and therapy of pulmonary disease. Specifically, novel optical techniques such as optical coherence tomography(OCT) can create a paradigm shift lung cancer diagnosis and obstructive airways diseases therapy. I steered in the development of a novel OCT needle probe to be used in the assessment of lung nodules accessed by bronchoscopy. I am a co-inventor on the OCT needle probe patent at Massachusetts General Hospital. My research on the histologic changes to the airway after bronchial thermoplasty blends well with non-invasive biopsies via optical coherence tomography. This work is ongoing with a NIH-sponsored grant in a collaboration with Drs. Melissa Suter and Adnan Majid.

After I joined the Interventional Pulmonology group at Beth Israel Deaconess Medical Center in 2017, I introduced airway-centered 3D printing to the IP group. I facilitated the spread of 3D printing to the Division of Pulmonary and Critical Care, including a pilot project in customized CPAP masks for obstructive sleep apnea. The use of 3d-printed, customized airways for teaching will accelerate skill acquisition for future trainees in pulmonary medicine. I developed case-derived, 3d-printed models to aid the education of physicians and patients in therapeutic bronchoscopy. For this work, I received the Heinrich Becker Young Investigators Award for Innovation.

As the site director of the combined Harvard MGH/BIDMC Interventional Pulmonology Program, I improved the learning environment in pulmonology and critical care. Monthly evaluations have been standardized for pulmonary and interventional pulmonary fellows including visiting fellows. 3D airway models are given to all fellows to improve their 3D anatomy orientation. I have conducted a procedural needs survey distributed through all program directors of Pulmonology and Critical Care programs in the United States in order to further standardize both the procedural teaching in fellowship as well as improve the coordination of procedural training between pulmonology and interventional pulmonology.

As Interventional Pulmonology grows as a profession, there will be a greater need to define its role in the overall procedural training of pulmonology and I plan to contribute to this discussion.