

DAVID H. CHANG, M.D., FACC

CURRICULUM VITAE

April 9th, 2021

PROFESSIONAL CONTACT INFORMATION

Business Address: Cedars-Sinai Medical Center
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EDUCATION

Undergraduate

University of California, Berkeley, Berkeley, CA 1991-1995
B.A., Immunology, June 1995

Medical Education

University of California, Irvine, Irvine, CA 1998-2002
M.D. College of Medicine, June 2002

Residency

University of California, Davis 2002-2005
Categorical Internal Medicine

University of California, Davis 2005-2006
Categorical Internal Medicine, Chief Resident

General Cardiology Fellowship

University of California, Los Angeles 2006-2009
Cardiology

University of California, Los Angeles 2009-2010
Cardiology, Chief Cardiology Fellow

Cedars-Sinai Medical Center, Los Angeles, CA 2009-2010
Department of Medicine, Division of Cardiology
Heart Failure/Heart Transplant Fellowship

LICENSURE:

California Medical License, #A84386 2003 –

Drug Enforcement Administration (DEA), BA BC8507420 2018 –
National Provider Identifier (NPI), 1518170083

BOARD CERTIFICATION:

American Board of Internal Medicine, Internal Medicine 2005 – 2015
Diplomat certified in Nuclear Cardiology 2008 – 2018
American Board of Internal Medicine, Cardiovascular Disease 2009 –
American Board of Internal Medicine, Advanced Heart Failure and Transplant Cardiology 2010 –
Testamur National Board of Echocardiography 2014 – 2024

PROFESSIONAL EXPERIENCE:

Present Position:

2014 – Associate Program Director of Post Graduate Medical Education in Heart Failure and
Transplantation Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center

2011 – Cardiologist, California Heart Center Foundation
University Cardiovascular Medical Group

2011 – Assistant Clinical Professor of Medicine, Department of Medicine, Division of
Cardiology. University of California, Los Angeles

Previous Position:

1995 – 1998 Research Associate, Immunology research in the lab of Dr. Ellen Robey, UC Berkeley
2009 – 2011 Clinical Instructor, Department of Medicine, Division of Cardiology. University of
California, Los Angeles
2010 – 2011 Staff Cardiologist, Tier system. Department of Medicine, Division of Cardiology. University
of California, Los Angeles.

PROFESSIONAL ACTIVITIES:

Committee Services:

2017 – 2019 Clinical Policy and Procedure Committee
2017 – 2019 Ambulatory High Value Care Committee
2017 – 2020 Program Evaluation Committee- Cardiology Fellowship Program
2017 – Clinical Competency Committee - Cardiology Fellowship Program
2018 – Heart Transplant Executive Committee
2020 – CPACS/Cupid Operations Committee

Professional Associations/Society Memberships:

2017 – Member, American College of Cardiology
Member, American Society of Transplantation
Member, Heart Failure Society of America
2018 – Member, International Society for Heart and Lung Transplantation
2019 – Member, American Heart Association

Community Services:

1991 – 1994 Red Cross Volunteer Aid to the Blind
1994 – 1996 Berkeley YMCA Youth Basketball Program

1994 – 1998	UC Berkeley CalStar volunteer
1996 – 1998	UC Berkeley Village Youth Basketball Program
1999 – 2001	UCI College of Medicine Big Sib volunteer
2003 – 2006	Volunteer Attending, Paul Hom Asian Clinic
2006 – 2009	Volunteer Attending, Simms-Mann Clinic

HONORS AND SPECIAL AWARDS:

1997	“Dave Chang Award for Outstanding Volunteer Service.” Youth Basketball Program, UC Berkeley Village
2001 – 2002	“Associated Medical Student Government Gold Headed Cane Award” in recognition of commitment and devotion to patient care. UC Irvine, College of Medicine
2003 – 2004	“Outstanding Professionalism Award, Junior Resident” UC Davis, Department of Internal Medicine
2007 – 2009	“Recognition for Outstanding Accomplishments in Teaching” UCLA, Division of Cardiology
2009 – 2010	“In Recognition of service as Chief Fellow to the Division of Cardiology Fellowship Program”

RESEARCH GRANTS AND FELLOWSHIPS RECEIVED:

Active/Ongoing:

Mesoblast	Chang (Site PI)	2014 –
DREAM HF - C41750/3100: A Double-blind, Randomized, Sham-procedure-controlled, Parallel-group Efficacy and Safety Study of Allogeneic Mesenchymal Precursor Cells (rexlemestrocel-L) in Patients with Chronic Heart Failure Due to Left Ventricular Systolic Dysfunction of either Ischemic or Nonischemic Etiology		

Alexion Inc.	Patel (PI)	2014 –
The DUET Cardiac Trial - The De-novo Use of Eculizumab Alongside Conventional Maintenance Therapy in Presensitized Patients Receiving Cardiac Transplantation: An, Open-Label, Investigator-Initiated Pilot Trial. Investigational pilot trial to determine the safety and efficacy of the de-novo use of eculizumab to prevent symptomatic antibody (AMR \geq 1) and/or cellular mediated rejection (\geq 2 Grade 2R) in highly sensitized cardiac transplantation recipients (PRA $>$ 70%). Role: Co-Investigator		

Abbott	Ramzy (site PI)	2015 –
MOMENTUM 3 (Multi-Center Study of Maglev Technology in Patients Undergoing MCS Therapy with HeartMate 3™ Role: Co-Investigator		

Abbott	Ramzy (site PI)	2016 –
MOMENTUM 3 CAP Multi-Center Study of Maglev Technology in Patients Undergoing MCS Therapy with HeartMate 3™ Continued Access Protocol: Post-Approval Continued Follow-up Role: Co-Investigator		

NIH/Duke University	Kransdorf (Site PI)	2017 –
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Entresto™ (LCZ696) In Advanced Heart Failure (Life Study). The purpose of this study is to evaluate the effects of LCZ696 (Entresto) compared to valsartan by evaluating NT-proBNP levels. The hypothesis is that patients with symptomatic heart failure due to left ventricular systolic dysfunction, treatment with LCZ696 for 24 weeks will improve NT-proBNP levels. The study is a randomized, double-blinded trial of advanced heart failure subjects.

Role: Co-Investigator

United Therapeutics

Hage (PI)

2017 –

Southpaw 301 - A Multicenter, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Safety and Efficacy of Oral Treprostinil in Subjects with Pulmonary Hypertension (PH) in Heart Failure with Preserved Ejection Fraction (HFpEF).

Role: Co-Investigator

United Therapeutics

Hage (PI)

2017 –

Southpaw 302 - An Open-label Extension Study of Oral Treprostinil in Subjects with Pulmonary Hypertension (PH) Associated with Heart Failure with Preserved Ejection Fraction (HFpEF) - A Long-Term Follow-up to Study TDE-HF-30

Amgen

Chang (Site PI)

2018 –

GALACTIC: A Double-blind, Randomized, Placebo-controlled, Multicenter Study to Assess the Efficacy and Safety of Omecamtiv Mecarbil on Mortality and Morbidity in Subjects with Chronic Heart Failure with Reduced Ejection Fraction

Bio Cardia, Inc

Chang (Site PI)

2019 –

CardiAMP Heart Failure Trial: Randomized Controlled Pivotal Trial of Autologous Bone Marrow Mononuclear Cells Using the CardiAMP Cell Therapy in Patients with Post Myocardial Infarction Heart Failure.

Alnylam Pharmaceuticals

Patel (site PI)

2020 – 2022

APOLLO-B - A Phase 3, Randomized, Double-blind, Placebo-controlled Multicenter Study to Evaluate the Efficacy and Safety of Patisiran in Patients with Transthyretin Amyloidosis with Cardiomyopathy (ATTR Amyloidosis with Cardiomyopathy)

Eidos Pharmaceuticals

Patel (site PI)

2019 – 2022

Eidos AG10-301/ATTRIBUTE-CM – A prospective, randomized, multicenter, parallel-group study will evaluate the efficacy and safety of AG10 in symptomatic subjects compared to placebo, administered on a background of stable heart failure therapy

Completed:

Pfizer, Inc.

Patel (Site PI)

2017 – 2020

ATTR- EXT - A Phase 3 Multicenter, Randomized, Double-Blind, Extension Study To Evaluate The Safety Of Daily Oral Dosing Of Tafamidis Meglumine (Pf-06291826) 20 Mg Or 80 Mg In Subjects Diagnosed With Transthyretin Cardiomyopathy (Ttr-Cm)

Role: Co-Investigator

RESEARCH FOCUS AND INTERESTS:

Since 2011, I have been fortunate to serve as a Cardiologist at the Cedars Sinai Smidt Heart Institute and California Heart Center with emphasis in the care of patients with end stage heart disease. In my training and as an attending physician, I have always valued the life-long learning process that encompasses a life in medicine and leads itself to teaching moments. My experience in basic science has stimulated an interest in clinical and translational research and a career that integrates immunology and clinical medicine.

INVITED LECTURES AND PRESENTATIONS:

1. Additional roles for Agrin at the Neuromuscular Junction. Guest Speaker, Genentech Inc., Host Dr. Ivar Kljavin, 4/95.
2. The Role of Notch in T Cell Development. Poster Presentation, UCSF/UC Berkeley Joint Immunology Conference at Granlibaken, 12/96.
3. Enhanced Prognostic Utility of the Exercise Treadmill Test in Women with Chest Pain: Role of Non-Electrocardiographic Exercise Variables. Oral Presentation, Abstract #2607, American Heart Association Scientific Sessions, 11/06. Chicago, IL.
4. Heart Failure and Advanced Heart Disease: An Overview of risk factors for heart disease, medical therapy for heart failure, and use of mechanical circulatory support and heart transplant for end stage heart disease. UCLA 50+ Community Based Lecture, 5/11
5. Overview of the Ventricular Assist Devices in the Treatment of Advanced Heart Failure. UCLA Division of Cardiology Ground Rounds, 5/11
6. Poster Presentation, Abstract #15858: Does Switching to Proliferation Signal Inhibitors Decrease the Risk of Developing Subsequent Malignancies in Heart Transplant Patients. American Heart Association Scientific Sessions, 11/15. Orlando, FL.
7. Poster Presentation, Abstract #13688: Patients With Autoimmune Disease: Not a Contraindication for Heart Transplantation. American Heart Association Scientific Sessions, 11/15. Orlando, FL.
8. Cardiovascular Stem Cell Therapy for Heart Failure 2016. Torrance Memorial Cardiology Symposium. April 2016
9. Treatment of Primary Graft Dysfunction with Plasmapheresis Improves Outcome ISHLT Annual Meeting, San Diego, CA April 2017
10. Advanced Heart Disease and use of MCS, Pomona Valley Hospital, Upland, CA, May 2017
11. Rapid Fire Debate: PRO- A History of Drug Abuse Should Be a Contraindication for Advanced Therapies. . Success with Failure: A Multi-Disciplinary Approach to Heart Failure CME Outreach presentation. (Los Angeles) May 2018
12. Heart Failure Guidelines: A Review. Success with Failure: A Multi-Disciplinary Approach to Heart Failure CME Outreach presentation. (Los Angeles) May 2018
13. Management of the Patient Prior to and Post Heart Transplantation. Cedars Sinai Surgical ICU Conference. October 2018
14. Case Presentation: 45 year old with high panel reactive antibody. American Heart Association Annual Meeting, Chicago, IL November 2018
15. Stem Cell Therapy for Heart Failure. Optimal Care and New Therapies for Advanced Heart Disease. CME Outreach presentation (Santa Barbara) November 2018

16. Cholesterol and Heart Disease. National Webinar for Morgan Stanley. 2/13/19.
17. The Art of Heart Transplantation as a Treatment for End Stage Heart Disease. International Symposium "Striving for a Better Life" in celebration of the grand opening of the new Dongsan Hospital. Daegu, Korea 5/17/19.
18. LVAD and TAH: US Experiences. Daegu Advanced Heart Failure Symposium. Daegu, Korea 5/18/19
19. Stem Cell Therapies for Heart Failure. CME Outreach presentation (Las Vegas). September 2019
20. Advanced Heart Failure Symposium. Virtual presentation and panel discussion. January 2021
21. Advanced Heart Failure Treatment during COVID-19 in the United States. 4th Daegu

TEACHING ACTIVITIES:

Non-Clinical Teaching

1. Simms-Mann Venice Family clinic, 2-3 times/year
2. Medical student teaching/Harvey sessions, quarterly, 2008-2009
3. UCLA CCU EKG lectures, monthly, 10/08- 5/09
4. UCLA Medical student physiology lab sessions, 2008-2011, 2-3 sessions/year
5. UCLA CCU Heart Transplantation lectures, monthly, 7/09-6/11
6. UCLA MS3 Preceptor, 7/2010 to 6/2011
7. Cedars-Sinai, Heart Failure/Heart Transplant 6SE Resident teaching service attending, 8 weeks/year, 7/11-present

BIBLIOGRAPHY/PUBLICATIONS

Research Papers – Peer Reviewed:

1. **Chang DH**, Youn JC, Dilibero D, Patel JK, Kobashigawa JA. Heart Transplant Immunosuppression Strategies at Cedars-Sinai Medical Center. *Int J Heart Fail*. 2021 Jan;3(1):15-30.
2. De la Rosa A, Aguilar J, Barbu AM, **Chang D**, Kobashigawa J. Uniqueness of laryngeal nerve injury following heart transplantation. *Clin Transplant*. 2020 Nov;34(11):e14075.
3. Aguilar J, **Chang DH**, Lin M et al. JC virus-associated nephropathy in a post-heart and -kidney transplantation patient. *Transplant Infectious Disease*. 2020 April; 22:313288.
4. Xie Y, Dilibero D, **Chang DH**. Review of Major Drug-Drug Interactions in Thoracic Transplantation. *Current Transplantation Reports*. 2018 September; 5(3): 220-230.
5. **Chang DH**, Kobashigawa J. Desensitization strategies in the patient awaiting heart transplantation. *Curr Opin Cardiol*. 2017 May; 32(3):301-7
6. **Chang DH**, Kobashigawa JA. Current diagnostic and treatment strategies for cardiac allograft vasculopathy. *Exp Rev Cardiovasc Ther*. 2015 Oct; 13(10): 1147-54.
7. **Chang D**, Kobashigawa J. Cardiac allograft immune activation: current perspectives. *Transplant Research and Risk Management*. 2015: 7 13-22.
8. **Chang DH**, Kittleson MM, Kobashigawa JA. Immunosuppression following heart transplantation: prospects and challenges. *Immunotherapy* (2014); 6(2): 181-194.
9. **Chang D**, Kobashigawa J. The use of the calculated panel-reactive antibody and virtual crossmatch in heart transplantation. *Curr Opin in Organ Transplant* 2012 Aug;17(4): 423-6.
10. Kransdorf E, **Chang D**, Ro R, Reznik R, Yu R, Gordon O, Patel J, Kittleson M, Kobashigawa J. Sympathetic Paraganglioma- Induced Cardiomyopathy Requiring Heart Transplantation. *J Heart Lung Transplant*. (Pending Publication).
11. Patel, J, Everly, M, Chang, D et al. Reduction of alloantibodies via proteasome inhibition in cardiac transplant. *J Heart Lung Transplant* 2011; 30: 1320-1326.
12. Liu T, Shehata M, **Chang D**, Patel J, Kittleson M, Kobashigawa J, Chugh SS, Wang X. Prolonged QT and cardiac arrest post heart transplantation: inherited or acquired? *J Electrocardiol*. 2011 May-Jun; 44(3): 350-2.
13. Nikolova AP, Hitzeman TC, Baum R, Caldaruse A-M, Agvanian S, Xie Y, Geft DR, **Chang DH**, et al. Association of a Novel Diagnostic Biomarker, the Plasma Cardiac Bridging Integrator 1 Score, With Heart Failure With Preserved Ejection Fraction and Cardiovascular Hospitalization. *JAMA Cardiol*. 2018 October; E1-E5.

14. Huynh, T, Tong, K, Chang, D, et al. Referral rates for women with chest pain and an ischemic stress test: Relationship to clinical profiles, non-ECG stress test variables, and prognosis. *Journal American College of Cardiology* 2008; vol 51, no. 10 (supplement A): A177.
15. Chang, D et al. Enhanced prognostic utility of exercise treadmill test in women with chest pain: Role of non-electrocardiographic exercise variables. *Circulation* 2006; vol 114, no. 18. II-540. [Also cited in Presentations section]
16. Chang, D. et al. MHC Recognition in Thymic Development: Distinct, Parallel Pathways for Survival and Lineage Commitment. *Journal of Immunology* 2000; 165(12): 6710-6715.
17. Washburn, T. Schweighoffer, E. Gridley, T. Chang, D. et al. Notch Activity Influences the Alpha-Beta Versus Gamma-Delta T Cell Lineage Decision. *Cell* 1997; 88: 833-843.
18. Chang, D. et al. "Agrin Inhibits Neurite Outgrowth but Promotes Attachment of Embryonic Motor and Sensory Neurons." *Developmental Biology* 1997; 181 (1): 21-35. 1/1997
19. Robey, E, Chang, D. et al. An Activated Form of Notch Influences the Choice between CD4 and CD8 T Cell Lineages. *Cell* 1996; 87: 483-492.
20. Rafiei M, Kittleson M, Patel J, Osborne A, **Chang D**, Czer L, Reinsmoen N, Esmailian F, Kobashigawa J. Anti-thymocyte Gammaglobulin May Prevent Antibody Production after Heart Transplantation. *Transplant Proc.* 2014;(10):3570-4
21. Awad M, Czer L, Soliman C, Mirocha J, Ruzza A, Pinzas J, Rihbany K, **Chang D**, Moriguchi J, Ramzy D, Esmailian F, Kobashigawa J, Arabia F. High Prevalence of Warfarin Genotype Polymorphisms in Patients with Mechanical Circulatory Support. *J Heart Lung Transplant.* 2015 Jul-Aug; 61(4): 391-6.
22. Azarbal B, Cheng R, Vanichsarn C, Patel JK, Czer LS, **Chang DH**, Kittleson MM, Kobashigawa JA. Induction Therapy With Antithymocyte Globulin in Patients Undergoing Cardiac Transplantation Is Associated With Decreased Coronary Plaque Progression as Assessed by Intravascular Ultrasound. *Circ Heart Fail.* 2016 Jan;9(1):e002252. doi: 10.1161/CIRCHEARTFAILURE.115.002252.
23. Cheng R, Azarbal B, Yung A, Patel JK, **Chang DH**, Liou F, Makkar R, Kobashigawa JA. Elevated immune monitoring as measured by increased adenosine triphosphate production in activated lymphocytes is associated with accelerated development of cardiac allograft vasculopathy after cardiac transplantation. *J Heart Lung Transplant.* 2016 Aug;35(8):1018-23. doi: 10.1016/j.healun.2016.03.016. Epub 2016 Mar 31.
24. Westerdahl DE, **Chang DH**, Hamilton MA, Nakamura M, Henry TD. Allogeneic mesenchymal precursor cells (MPCs): an innovative approach to treating advanced heart failure. *Expert Opin Biol Ther.* 2016 Sep;16(9):1163-9. doi: 10.1080/14712598.2016.1206526. Epub 2016 Jul 8.

25. Awad M, Czer L, Esmailian F, Jordan S, De Robertis MA, Mirocha J, Patel J, **Chang D**, Kittleson M, Ramzy D, Arabia F, Chung J, Cohen J, Trento A, Kobashigawa J. Combined heart and kidney transplantation: a 23-year experience. *Transplant Proc.* 2017 Mar; 49(2):348-53
26. Leong D, Aintablian T, Kittleson M, Olymbios M, Patel J, **Chang DH**, Kobashigawa J. Prolonged corrected QT interval in the donor heart: Is there a risk? *Clin Transplant.* 2017 June; 31(7):e12996.
27. Cheng R, Vanichsam C, Patel JK, Currier J, **Chang DH**, Kittleson MM, Makkar R, Kobashigawa JA, Azarbal B. Long-term clinical and angiographic outcomes of percutaneous coronary intervention with everolimus-eluting stents for the treatment of cardiac allograft vasculopathy. *Catheter Cardiovasc Interv.* 2017 Jul;90(1):48-55. doi: 10.1002/ccd.26830. Epub 2016 Nov 10.
28. Dong E, Morris K, Sodhi G, **Chang D**, Czer L, Chung J, Zabner R, Klapper E, Kobashigawa J, Nurok M. Neuroinvasive West Nile Virus Post Heart Transplantation. *Transplantation Proceedings*, 50, 4057-4061 (2018)
29. Hitzeman TC, Xie Y, Zadikany RH, Nikolova AP, Baum R, Caldaruse AM, Agvanian S, Melmed GY, McGovern DPB, Geft DR, **Chang DH**, Moriguchi JD, Hage A, Azarbal B, Czer LS, Kittleson MM, Patel JK, Wu AHB, Kobashigawa JA, Hamilton M, Hong T, Shaw RM. cBIN1 Score (CS) Identifies Ambulatory HFREF Patients and Predicts Cardiovascular Events. *Front Physiol.* 2020 May 25;11:503. doi:10.3389/fphys.2020.00503. PMID: 32670075; PMCID: PMC7326053.
30. Aguilar J, **Chang DH**, Lin M, Hou J, Huang E, Kittleson M, Patel J, Kobashigawa J. JC virus-associated nephropathy in a post-heart and -kidney transplantation patient. *Transpl Infect Dis.* 2020 Jun;22(3):e13288. doi: 10.1111/tid.13288. Epub 2020 Apr 23. PMID: 32282976.
31. Vaidya G, Czer LSC, Kobashigawa J, Kittleson M, Patel J, **Chang D**, Kransdorf E, Shikhare A, Tran H, Vo A, Ammerman N, Huang E, Zabner R, Jordan S. Successful Treatment of Severe COVID-19 Pneumonia With Clazakizumab in a Heart Transplant Recipient: A Case Report. *Transplant Proc.* 2020 Nov;52(9):2711-2714. doi: 10.1016/j.transproceed.2020.06.003. Epub 2020 Jun 7. PMID: 32563584; PMCID: PMC7275980.
32. Patel JK, Coutance G, Loupy A, Dilibero D, Hamilton M, Kittleson M, Kransdorf E, Azarbal B, Seguchi O, Zhang X, **Chang D**, Geft D, Czer L, Varnous S, Kobashigawa JA. Complement Inhibition for Prevention of Antibody-mediated Rejection in Immunologically High-risk Heart Allograft Recipients. *Am J Transplant.* 2020 Nov 29. doi: 10.1111/ajt.16420. Epub ahead of print. PMID: 33251691.
33. Vaidya GN, Czer LSC, Luthringer D, Kittleson M, Patel J, **Chang DH**, Kransdorf E, Geft D, Azarbal B, Hamilton M, Kobashigawa J. Heart Transplantation for Giant Cell Myocarditis: A Case Series. *Transplant Proc.* 2020 Dec 28:S0041-1345(20)32890-6. doi: 10.1016/j.transproceed.2020.10.047. Epub ahead of print. PMID: 33384178.

34. Zadikany RH, Cole RM, **Chang DH**, Patel JK, Geft DR, Czer L, Esmailian F, Ramzy D, Moriguchi JD, Kobashigawa JA, Kittleson MM. Total Artificial Heart as Bridge to Cardiac Replantation. *ASAIO J.* 2021 Mar 1;67(3):e77-e79. doi: 10.1097/MAT.0000000000001217. PMID: 33627614; PMCID: PMC7326319.
35. Vaidya GN, Patel JK, Kittleson M, **Chang DH**, Kransdorf E, Geft D, Czer L, Vescio R, Esmailian F, Kobashigawa JA. Intermediate-term Outcomes of Heart Transplantation for Cardiac Amyloidosis in the Current Era. *Clin Transplant.* 2021 Apr 7:e14308. doi: 10.1111/ctr.14308. Epub ahead of print. PMID: 33825224.

Research Papers – Peer Reviewed (In Press): None

Research Papers – Peer Reviewed (Submitted): None

Chapters:

1. **Chang D**, Kobashigawa J. Cardiac Allograft Rejection, Surveillance, and Treatment. *Clinical Guide to Heart Transplantation* pp157-170. Springer. 2017.
2. **Chang D**, Kobashigawa J, Luu M. Outpatient Management and Long-Term Complications in Heart Transplantation. *Clinical Guide to Heart Transplantation* pp171-183. Springer. 2017.

Letters: None

Reviews: None

Editorials: None

Papers in Preparation (Research Completed): None

Abstracts:

1. Patel J, Kittleson M, Rafiei M, Stern L, **Chang D**, Czer L, Trento A, Kobashigawa J. Desensitization Therapy with Immunoglobulin (IVIg) and Rituximab for Patients Awaiting Heart Transplantation. *J Heart and Lung Transplant.* 2012; 31(4): S161
2. Patel J, Shiozaki R, Rafiei M, Stern L, Kittleson M, **Chang D**, Czer L, Esmailian F, Kobashigawa J. Application of Immunosuppression Clinical Trial Results in Reducing the Incidence of Heart Transplant Rejection-Bridging the New Millennium. *J Heart and Lung Transplant.* 2012; 31(4): S24
3. Czer L, Patel J, Kittleson M, Rafiei M, Stern L, **Chang D**, Luthringer D, Esmailian F, Kobashigawa J. Consequences of First-Year Rejection after Heart Transplantation: Is the Worse yet to Come? *J Heart and Lung Transplant.* 2012; 31(4): S25
4. Patel J, Kittleson M, Rafiei M, Stern L, Tang Z, **Chang D**, Luthringer D, Czer L, Trento A, Kobashigawa J. The Natural History of Biopsy Negative Rejection after Heart Transplantation. *J Heart and Lung Transplant.* 2012; 31(4): S235

5. Moriguchi J, Patel J, Kittleson M, Rafiei M, Stern L, Chai W, **Chang D**, Trento A, Czer L, Kobashigawa J. Risk for Deep Vein Thrombosis and Pulmonary Embolism after Heart Transplantation: Characterization of an Old Problem. *J Heart and Lung Transplant*. 2012; 31(4): S235
6. Patel J, Kittleson M, Kansara P, Rafiei M, Stern L, **Chang D**, Azarbal B, Czer L, Esmailian F, Kobashigawa J. Outcomes Validation of the New ISHLT Cardiac Allograft Vasculopathy Coronary Angiogram Grading Scale. *J Heart and Lung Transplant*. 2012; 31(4): S121
7. Czer L, Patel J, Kittleson M, Rafiei M, Stern L, **Chang D**, Azarbal B, Trento A, Kobashigawa J. Distal Pruning as an Important Factor for Outcome in the New ISHLT Cardiac Allograft Vasculopathy Grading Scale. *J Heart and Lung Transplant*. 2012; 31(4): S121-S122
8. Rafiei M, Czer L, Patel J, Kittleson M, Stern L, **Chang D**, Esmailian F, Kobashigawa J. Combined Heart-Kidney Transplant Compared to Heart Transplant Alone May Reduce Long Term Development of Cardiac Allograft Vasculopathy. *Am J Transplant*. 2012; 12 (Suppl 3): 384
9. Moriguchi J, Kittleson M, Patel J, Coleman B, Jamero G, Runyan C, Olay C, Jocson R, **Chang D**, Czer L, Trento A, Esmailian F, Kobashigawa J. Are Sensitized VAD Patients Similar to Sensitized non-VAD Patients in Terms of Outcome? *Am J Transplant*. 2012; 12 (Suppl 3): 120-121
10. Kansara P, Czer L, Patel J, Kittleson M, Mirocha J, Moriguchi J, **Chang D**, De Robertis M, Trento A, Kass R, and Kobashigawa J. Prior Cardiac Surgery is a Predictor of Mortality in the First-Year in Heart Transplant Recipients. *Am J Transplant*. 2012; 12 (Suppl 3): 476
11. Kransdorf E, Czer L, Patel J, Zakowski P, Gaultier C, Zabner R, **Chang D**, Kittleson M, Kobashigawa J. High Prevalence and Reactivation of Chagas Disease in Heart Transplant Recipients. *Am J Transplant*. 2012; 12 (Suppl 3): 477-478
12. Dhiantravan V, Patel J, Kittleson M, Rafiei M, Osborne A, **Chang D**, Czer L, Kobashigawa J. Mycophenolate not Azathioprine with Increased Risk for Skin Cancer after Heart Transplant. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 195
13. Geft D, Patel J, Kittleson M, **Chang D**, Rafiei M, Osborne A, Czer L, Esmailian F, Kobashigawa J. Use of Cylex Immune Monitoring Score to Guide Immunosuppression After Heart Transplantation Reduces Infection Risk. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 196
14. Kansara P, Czer L, Patel J, Mirocha J, Kittleson M, De Robertis M, Moriguchi J, **Chang D**, Ramzy D, Kass R, Esmailian F, Trento A, Kobashigawa J. Early Mortality and Morbidity in Heart Transplant Recipients with Prior History of Cardiac Surgery: Analysis of United Network for Organ Sharing Database. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 196
15. Tadwalkar R, Kittleson M, Patel J, Moriguchi J, Rafiei M, Osborne A, **Chang D**, Czer L, Esmailian F, Reinsmoen N, Kobashigawa J. Establishing a PRA Threshold to Treat Sensitized

Patients Awaiting Heart Transplant in the Era of the Virtual Crossmatch. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 163

16. Song H, Kittleson M, Patel J, Rafiei M, Osborne A, **Chang D**, Ramzy D, Hage A, Czer L, Kobashigawa J. Change in Cylex Scores Predicts Risk for Infection in the First-Year following Heart Transplantation. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 196
17. Moradzadeh A, Kittleson M, Patel J, Rafiei M, Osborne A, **Chang D**, Czer L, Kobashigawa J. The Risk of Clostridium Difficile in Heart Transplant Patients on Different Immunosuppression Regimens. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 195
18. Aaronson A, Kittleson M, Patel J, Rafiei M, Osborne A, **Chang D**, Czer L, Kobashigawa J. Benefit of Tacrolimus/Mycophenolate to Reduce Cardiac Allograft Vasculopathy after Heart Transplantation. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 195
19. Rafiei M, Kittleson M, Patel J, Osborne A, **Chang D**, Czer L, Reinsmoen N, Kobashigawa J. Anti-thymocyte Gammaglobulin May Prevent Antibody Production after Heart Transplantation. *J Am College of Cardiology*. 2013; 61(10) Suppl A: 196
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