


Disciplina MCP5876 
Análise Crítica dos Resultados do Transplante Cardíaco no Tratamento da Insuficiência Cardíaca Refratária

Área de Concentração: 5131

Criação: 20/01/2022

Ativação: 20/01/2022

Nr. de Créditos: 2

Carga Horária:

Teórica (por semana)	Prática (por semana)	Estudos (por semana)	Duração	Total
4	12	14	1 semanas	30 horas

Docentes Responsáveis:

Fernando Bacal

Fabiana Goulart Marcondes Braga

Sandrigo Mangini

Objetivos:

Formar e aperfeiçoar recurso humano. em pesquisa e docência em transplante cardíaco, destacando-se aspectos relacionados à doação de órgãos, o paciente com insuficiência cardíaca refratária e os resultados do transplante cardíaco.

Justificativa:

Apesar do grande avanço no tratamento da insuficiência cardíaca nas últimas décadas, esta síndrome clínica ainda apresenta alta taxa de mortalidade. O transplante cardíaco é considerado o tratamento padrão-ouro da insuficiência cardíaca refratária, no entanto, situações como a escassez de doadores limita a realização de um maior número de transplantes e aliada à gravidade dos receptores, vem ampliando a indicação e utilização de dispositivos de assistência circulatória mecânica. Por se tratar de uma população reduzida para realização de grandes estudos clínicos randomizados, a análise crítica dos dados disponíveis e a proposição de novas pesquisas permite vislumbrar melhores resultados no transplante cardíaco.

Conteúdo:

O curso será dividido em 3 módulos e os alunos alocados em cada um deles: doador, receptor e transplante. Na manhã do primeiro dia, serão realizadas palestras introdutórias e após os alunos terão 3 períodos de estudo para confecção dos seminários e uma tarefa específica para cada módulo. Ao final haverá avaliação.

Forma de Avaliação:

Desempenho no preparo e apresentação dos seminários e tarefa do grupo Resposta à pergunta central do curso Proposição de estudo envolvendo transplante cardíaco e/ou insuficiência cardíaca refratária

Observação:

Número mínimo de alunos: 6 Número máximo de alunos: 18

Bibliografia:

Bacal F, Marcondes-Braga FG, Rohde LEP, Xavier Júnior JL, Brito FS, Moura LAZ, Colafranceschi AS, Lavagnoli CFR, Gelape CL, Almeida DR, Gaiotto FA, Atik FA, Figueira FAMS, Souza GEC, Rodrigues H, Campos IW, Souza Neto JD, Rossi Neto JM, Gasparetto J, Goldraich LA, Benvenuti LA, Seguro LFBC, Ulhôa Júnior MB, Moreira MDCV, Ávila MS, Carneiro R, Mangini S, Ferreira SMA, Strabelli TM. 39 Diretriz Brasileira de Transplante Cardíaco. *Arq Bras Cardiol.* 2018 Aug;111(2):230-289. Portuguese. doi: 10.5935/abc.20180153. Erratum in: *Arq Bras Cardiol.* 2019 Jan;112(1):116. PMID: 30335870. Marcondes-Braga FG, Moura LAZ, Issa VS, Vieira JL, Rohde LE, Simões MV, Fernandes-Silva MM, Rassi S, Alves SMM, Albuquerque DC, Almeida DR, Bocchi EA, Ramires FJA, Bacal F, Rossi Neto JM, Danzmann LC, Montera MW, Oliveira Junior MT, Clausell N, Silvestre OM, Bestetti RB, Bernadez-Pereira S, Freitas AF Jr, Biolo A, Barretto ACP, Jorge AJL, Biselli B, Montenegro CEL, Santos Júnior EGD, Figueiredo EL, Fernandes F, Silveira FS, Atik FA, Brito FS, Souza GEC, Ribeiro GCA, Villacorta H, Souza Neto JD, Goldraich LA, Beck-da-Silva L, Canesin MF, Bittencourt MI, Bonatto MG, Moreira MDCV, Avila MS, Coelho Filho OR, Schwartzmann PV, Mourilhe-Rocha R, Mangini S, Ferreira SMA, Figueiredo Neto JA, Mesquita ET. Emerging Topics Update of the Brazilian Heart Failure Guideline - 2021. *Arq Bras Cardiol.* 2021 Jun;116(6):1174-1212. English, Portuguese. doi: 10.36660/abc.20210367. Goldraich LA, Leitão SAT, Scolari FL, Marcondes-Braga FG, Bonatto MG, Munyal D, Harrison J, Ribeiro RVP, Azeka E, Piardi D, Costanzo MR, Clausell N. A Comprehensive and Contemporary Review on Immunosuppression Therapy for Heart Transplantation. *Curr Pharm Des.* 2020;26(28):3351-3384. doi: 10.2174/1381612826666200603130232. PMID: 32493185. Yancy CW, Drazner MH, Coffin ST, Cornwell W 3rd, Desai S, Erwin JP 3rd, Ginwalla M, Harshaw Ellis KS, Horwich T, Kittleson M, Lala A, Lewsey SC, Marine JE, Martin CM, Meehan K, Morrow DA, Schlendorf K, Smith JW, Stevens GR. 2020 ACC/HFSA/ISHLT Lifelong Learning Statement for Advanced Heart Failure and Transplant Cardiology Specialists: A Report of the ACC Competency Management Committee. *J Am Coll Cardiol.* 2020 Mar 17;75(10):1212-1230. doi: 10.1016/j.jacc.2019.09.030. Epub 2020 Feb 17. PMID: 32081442. Comitê Coordenador da Diretriz de insuficiência Cardíaca, Diretriz Brasileira de Insuficiência, Cardíaca Crônica e Aguda. *Arq Bras Cardiol.* 2018 Sep;111(3):436-539. Portuguese. doi: 10.5935/abc.20180190. Erratum in: *Arq Bras Cardiol.* 2019 Jan;112(1):116. PMID: 30379264. Marcondes-Braga FG, Murad CM, Belfort DSP, Dantas RCT, Lira MTSS, Aragão CAS, Siciliano RF, Mangini S, Seguro LFBC, Campos IW, Avila MS, Bello MVO, Dos Santos FBA, Strabelli TMV, Gaiotto FA, Bacal F. Characteristics and Outcomes of Heart Transplant Recipients with Coronavirus-19 Disease in A High-Volume Transplant Center. *Transplantation.* 2021 Mar 22. doi: 10.1097/TP.0000000000003770. Epub ahead of print. PMID: 33756548. Mehra MR, Canter CE, Hannan MM, Semigran MJ, Uber PA, Baran DA, Danziger-Isakov L, Kirklin JK, Kirk R, Kushwaha SS, Lund LH, Potena L, Ross HJ, Taylor DO, Verschuuren EAM, Zuckermann A; International Society for Heart Lung Transplantation (ISHLT) Infectious Diseases, Pediatric and Heart Failure and Transplantation Councils. The 2016 International Society for Heart Lung Transplantation listing criteria for heart transplantation: A 10-year update. *J Heart Lung Transplant.* 2016 Jan;35(1):1-23. doi: 10.1016/j.healun.2015.10.023. PMID: 26776864. Badano LP, Miglioranza MH, Edvardsen T, Colafranceschi AS, Muraru D, Bacal F, Nieman K, Zoppellaro G, Marcondes Braga FG, Binder T, Habib G, Lancellotti P; Document reviewers. European Association of Cardiovascular Imaging/Cardiovascular Imaging Department of the Brazilian Society of Cardiology recommendations for the use of cardiac imaging to assess and follow patients after heart transplantation. *Eur Heart J Cardiovasc Imaging.* 2015 Sep;16(9):919-48. doi: 10.1093/ehjci/jev139. Epub 2015 Jul 2. PMID: 26139361. Mangini S, Alves BR, Silvestre OM, Pires PV, Pires LJ, Curiati MN, Bacal F. Heart transplantation: review. *Einstein (Sao Paulo).* 2015 Apr-Jun;13(2):310-8. doi: 10.1590/S1679-45082015RW3154. PMID: 26154552; PMCID: PMC4943829. Galiè N, Humbert M, Vachiery JL, Gibbs S, Lang I, Torbicki A, Simonneau G, Peacock A, Vonk Noordegraaf A, Beghetti M, Ghofrani A, Gomez Sanchez MA, Hansmann G, Klepetko W, Lancellotti P, Matucci M, McDonagh T, Pierard LA, Trindade PT, Zompatori M, Hoeper M; ESC Scientific Document Group. 2015 ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension: The Joint Task Force for the Diagnosis and Treatment of Pulmonary Hypertension of the European Society of Cardiology (ESC) and the European Respiratory Society (ERS): Endorsed by: Association for European Paediatric

and Congenital Cardiology (AEPC), International Society for Heart and Lung Transplantation (ISHLT). *Eur Heart J*. 2016 Jan 1;37(1):67-119. doi: 10.1093/eurheartj/ehv317. Epub 2015 Aug 29. PMID: 26320113. Weiss ES, Allen JG, Kilic A, Russell SD, Baumgartner WA, Conte JV, Shah AS. Development of a quantitative donor risk index to predict short-term mortality in orthotopic heart transplantation. *J Heart Lung Transplant*. 2012;31(3):266-73. Smits JM, Pauw M, de Vries E, Rahmel A, Meiser B, et al. Donor scoring system for heart transplantation and the impact on patient survival. *J Heart Lung Transplant*. 2012; 31(4):387-97. Frontera JA1, Kalb T. How I manage the adult potential organ donor: donation after neurological death (part 1). *Neurocrit Care*. 2010; 12(1):103-10. Frontera JA. How I manage the adult potential organ donor: donation after cardiac death (part 2). *Neurocrit Care*. 2010;12(1):111-6. Quader MA, Wolfe LG, Kasirajan V. Heart transplantation outcomes from cardiac arrest resuscitated donors. *J Heart Lung Transplant*. 2013; 32(11):1090-5. Levy WC, Mozaffarian D, Linker DT, Sutradhar SC, Anker SD, Cropp AB, Anand I, Maggioni A, Burton P, Sullivan MD, Pitt B, Poole-Wilson PA, Mann DL, Packer M. The Seattle Heart Failure Model: prediction of survival in heart failure. *Circulation*. 2006;113(11):1424-33. Goda A, Williams P, Mancini D, Lund LH. Selecting patients for heart transplantation: comparison of the Heart Failure Survival Score (HFSS) and the Seattle heart failure model (SHEM). *J Heart Lung Transplant*. 2011; 30(11):1236-43. Zugck C, Krüger C, Kell R, Körber S, Schellberg D, Kübler W, Haass M. Risk stratification in middle-aged patients with congestive heart failure: prospective comparison of the Heart Failure Survival Score (HFSS) and a simplified two-variable model. *Eur J Heart Fail*. 2001; 3(5):577-85. Smits JM, de Vries E, De Pauw M, Zuckermann A, Rahmel A, Meiser B, Laufer G, Reichenspurner H, Strueber M. Is it time for a cardiac allocation score? First results from the Eurotransplant pilot study on a survival benefit-based heart allocation. *J Heart Lung Transplant*. 2013; 32(9):873-80. Alba AC, Rao V, Ivanov J, Ross HJ, Delgado DH. Usefulness of the INTERMACS scale to predict outcomes after mechanical assist device implantation. *J Heart Lung Transplant*. 2009; 28(8):827-33. Kirklin JK, Cantor R, Mohacsi P, Ummert J, De By T, Hannan MM, Kormos RL, Schueler S, Lund LH, Nakatani T, Taylor R, Lannon J. First Annual IMACS Report: A global International Society for Heart and Lung Transplantation Registry for Mechanical Circulatory Support. *J Heart Lung Transplant*. 2016; 35(4):407-12. Wever-Pinzon , Drakos SG, Kfoury AG, Nativi JN, Gilbert EM, Everitt M, Alharethi R, Brunisholz K, Bader FM, Li DY, Selzman CH, Stehlik J. Morbidity and mortality in heart transplant candidates supported with mechanical circulatory support: is reappraisal of the current United network for organ sharing thoracic organ allocation policy justified? *Circulation*. 2013; 127(4):452-62. Galantier J, Moreira LF, Benício A, Leirner AA, Cestari I, Bocchi EA, Bacal F, Stolf NA. Hemodynamic performance and inflammatory response during the use of VAD-InCor as a bridge to transplant. *Arq Bras Cardiol*. 2008;91(5):327-34. Arnaoutakis GJ, George TJ, Allen JG, Russell SD, Shah AS, Conte JV, Weiss ES. Institutional volume and the effect of recipient risk on short-term mortality after orthotopic heart transplant. *J Thorac Cardiovasc Surg*. 2012; 143(1):157-6. Weiss ES, Allen JG, Arnaoutakis GJ, George TJ, Russell SD, Shah AS, Conte JV. Creation of a quantitative recipient risk index for mortality prediction after cardiac transplantation (IMPACT). *Ann Thorac Surg*. 2011; 92(3):914-21. Dardas TF, Cowger J, Koelling TM, Aaronson KD, Pagani FD. The effectiveness of United Network of Organ Sharing status 2 transplantation in the modern era. *J Heart Lung Transplant*. 2011; 30(10):1169-74. The International Society of Heart and Lung Transplantation. Guidelines for the care of heart transplant recipients. *J Heart Lung Transplant* 2010; 29:914-956 Bacal F, Souza-Neto JD, Fiorelli AI, Mejia J, Marcondes-Braga FG, Mangini S, et al. Il Diretriz Brasileira de Transplante Cardíaco. *Arq Bras Cardiol*. 2009;94(1 supl.1):e16-e73. Mangini S, Alves BR, Silvestre OM, Pires PV, Pires LJ, Curiati MN, Bacal F. Einstein (Sao Paulo). 2015; 13(2):310-8. Heart transplantation: review. Ayub-Ferreira SM, Souza JD Neto, Almeida DR, Biselli B, Avila MS, Colafranceschi AS, Stefanello B, Carvalho BM, Polanczyk CA, Galantini DR, Bocchi EA, Chamlian EG, Hojaij EM, Gaiotto FA, Pinton FA, Jatene FB, Ramires F, Atik FA, Figueira.F, Bacal F, Galas F, Brito FS, Conceição Souza GE, Ribeiro G, Ja P Jr, Souza JM, Rossi JM Neto, Lima), Mejía JC, Fernandes JR, Baumworcel L, Moura L, Hajjar LA, Beck-da-Silva L, Rohde L, Seguro L, Pinheiro ML, Park M, Fernandes MR, Montera MW, Alves M, Mrb W Jr, Hossne N, Fernandes P, Lemos P, Schneidewind RO, Uchoa RB, Honorato R, Mangini S, Falcão S, Lopes S, Strabelli T, Guimarães ITST, Campanili T, Issa VS. Diretriz de Assistência Circulatória Mecânica da Sociedade Brasileira de Cardiologia. *Arq Bras Cardiol*. 2016; 107(2 Suppl 2):1-33. Eisen HJ, Kobashigawa J, Starling RC, Pauly DF, Kfoury A, Ross H, Wang SS, Cantin B, Van Bakel A, Ewald G, Hirt S, Lehmkuhl H, Keogh A, Rinaldi M, Potena L, Zuckermann A, Dong G, Cornu-Artis C, Lopez P. Everolimus versus mycophenolate mofetil in heart transplantation: a randomized, multicenter trial. *Am J Transplant*. 2013;13(5):1203-16. Eisen HJ, Tuzcu EM, Dorent R, Kobashigawa J, Mancini D, Valentine-von Kaeppler HA, Starling RC, Sørensen K, Hummel M, Lind JM, Abeywickrama KH, Bernhardt P; RAD B253

Study Group. Everolimus for the prevention of allograft rejection and vasculopathy in cardiac-transplant recipients. *N Engl J Med.* 2003; 349(9):847-58. Hirt SW, Bara C, Barten MJ, Deuse T, Doesch AO, Kaczmarek I, Schulz U, Stypmann J, Haneya A, Lehmkuhl HB. Everolimus in Heart Transplantation: An Update. *J. Transplant.* 2013; 2013:683964. Bocchi EA, Ahualli L, Amuchastegui M, Bouillon F, Cerutti B, Colque R, Fernandez D, Fiorelli A, Olaya P, Vulcado N, Perrone SV. Recommendations for use of everolimus after heart transplantation: results from a Latin-American Consensus Meeting. *Transplant Proc.* 2006; 38(3):937-42. Hummel M. Recommendations for use of Certican (everolimus) after heart transplantation: results from a German and Austrian Consensus Conference. *J Heart Lung Transplant.* 2005; 24 (4 Suppl):S196-200. Mancini D, Pinney S, Burkhoff D, LaManca J, Itescu S, Burke E, Edwards N, OZ M, Marks AR. Use of rapamycin slows progression of cardiac transplantation vasculopathy. *Circulation.* 2003; 108(1):48-53. Keogh A, Richardson M, Ruygrok P, Spratt P, Galbraith A, O'Driscoll G, Macdonald P, Esmore D, Muller D, Faddy S. Sirolimus in de novo heart transplant recipients reduces acute rejection and prevents coronary artery disease at 2 years: a randomized clinical trial. *Circulation.* 2004; 110(17):2694-700. Ayub-Ferreira SM, Avila MS, Feitosa FS, Souza GE, Mangini S, Marcondes-Braga FG, Issa VS, Bacal F, Chizzola PR, Cruz FD, Bocchi EA. Recovery of renal function in heart transplantation patients after conversion from a calcineurin inhibitor-based therapy to sirolimus. *Transplant Proc.* 2010; 42(2):542-4. Schmauss D, Weis M. Cardiac Allograft Vasculopathy : Recent Developments. *Circulation.* 2008;117:2131-2141. Schroeder JS, Gao SZ, Alderman EL, Hunt SA, Johnstone I, Boothroyd DB, Wiederhold V, Stinson EB. A preliminary study of diltiazem in the prevention of coronary artery disease in heart transplant recipients. *N Engl J Med.* 1993; 328(3):164-70. Wenke K, Meiser B, Thiery J, Nagel D, von Scheidt W, Krobot K, Steinbeck G, Seidel D, Reichart B. Simvastatin initiated early after heart transplantation: 8-year prospective experience. *Circulation.* 2003; 107(1):93-7. Mehra MR, Uber PA, Vivekananthan K, Solis S, Scott RL, Park MH, Milani RV, Lavie aj. Comparative beneficial effects of simvastatin and pravastatin on cardiac allograft rejection and survival. *J Am Coll Cardiol.* 2002; 40(9):1609-14. Bacal F, Moreira L, Souza G, Rodrigues AC, Fiorelli A, Stolf N, et al. Dobutamine stress echocardiography predicts cardiac events or death in asymptomatic patients long-term after heart transplantation: 4-year prospective evaluation. *J Heart Lung Transplant.* 2004;23(11):1238-44. Lund LH, Edwards LB, Dipchand AI, Goldfarb S, Kucheryavaya AY, Levvey BJ, Meiser B, Rossano JW, Yusef RD, Stehlik J; International Society for Heart and Lung Transplantation. The Registry of the International Society for Heart and Lung Transplantation: Thirty-third Adult Heart Transplantation Report-2016; Focus Theme: Primary Diagnostic Indications for Transplant. *J Heart Lung Transplant.* 2016;35(10):1158-1169. Opelz G, Döhler B, Laux G. Long-term prospective study of steroid withdrawal in kidney and heart transplant recipients. *Am J Transplant.* 2005;(5): 720-8. Taylor DO, Barr ML, Radovancevic B, Renlund DG, Mentzer RM, Smart FW, et al. A randomized, multicenter comparison of tacrolimus and cyclosporine immunosuppressive regimens in cardiac transplantation: decreased hyperlipidemia and hypertension with tacrolimus. *J Heart Lung Transplant.* 1999;18(4):336-45. Reichart B, Meiser B, Viganò M, Rinaldi M, Yacoub M, Banner NR, et al. European multicenter tacrolimus heart pilot study: three year follow-up. *J Heart Lung Transplant.* 2001;20(2):249-250. Kobashigawa JA, Miller LW, Russell SD, Ewald GA, Zucker MJ, Goldberg LR, et al. Tacrolimus with mycophenolate mofetil (MMF) or sirolimus vs. cyclosporine with MMF in cardiac transplant patients: 1-year report. *Am J Transplant.* 2006;6(6):1243-45. Grimm M, Rinaldi M, Yonan NA, Arpesella G, Arizón Del Prado JM, Pulpón LA, et al. Superior prevention of acute rejection by tacrolimus vs. cyclosporine in heart transplant recipients--a large European trial. *Am J Transplant.* 2006;6(6):1387-97. Mentz RM Jr, Jahania MS, Lasley RD. Tacrolimus as a rescue immunosuppressant after heart and lung transplantation. The US multicenter FK506 Study group. *Transplantation.* 1998;65(1):109-13. Kobashigawa J, Miller L, Renlund D, Mentzer R, Alderman E, Bourge R, et al. A randomized active-controlled trial of mycophenolatemofetil in heart transplant recipients. *Transplantation.* 1998;66(4):507-15. Hosenpud JD, Bennett LE. Mycophenolatemofetil versus azathioprine in patients surviving the initial cardiac transplant hospitalization: an analysis of the Joint UNOS/ISHLTThoracic Registry. *Transplantation.* 2001;72(10):1662-5. Keogh A. Long-term benefits of mycophenolate mofetil after heart transplantation. *Transplantation.* 2005;79(3 Suppl):345-6. O'Neill JO, Edwards LB, Taylor DO. Mycophenolate mofetil and risk of developing malignancy terorthotopic heart transplantation: analysis of the transplant registry of the ISHLT. *J Heart* 2006;25(10):1186-91. Eisen HJ, Kobashigawa JA, Keogh A, Bourge R, Renlund D, Mentzer R. Three-year results of a randomized, double-blind, controlled trial of mycophenolate mofetil versus azathioprine in cardiac transplant recipients. *J Heart Lung Transplant.* 2005;24(5):517-25. Söderlund C, Rådegran G. Immunosuppressive therapies after heart transplantation --The balance between under- and over-immunosuppression. *Transplant Rev*

(Orlando). 2015; 29(3):181-9. Colvin MM, Cook JL, Chang P, Francis G, Hsu DT, Kiernan MS, Kobashigawa JA, Lindenfeld J, Masri SC, Miller D, O'Connell J, Rodriguez ER, Rosengard B, Self S, White-Williams C, Zeevi A. Antibody-mediated rejection in cardiac transplantation: emerging knowledge in diagnosis and management: a scientific statement from the American Heart Association. *Circulation*. 2015; 131(18):1608-39. Wu GW, Kobashigawa JA, Fishbein MC, Patel JK, Kittleson MM, Reed EF, et al. Asymptomatic antibody-mediated rejection after heart transplantation predicts poor outcomes. *J Heart Lung Transplant*. 2009;28(5):417-22. Kfoury AG, Hammond ME, Snow GL, Drakos SG, Stehlik J, Fisher PW, et al. Cardiovascular mortality among heart transplant recipients with asymptomatic antibody-mediated or stable mixed cellular and antibody-mediated rejection. *J Heart Lung Transplant*. 2009;28(8):781-4. Kfoury AG, Snow GL, Budge D, Alharethi RA, Stehlik J, Everitt MD, et al. A longitudinal study of the course of asymptomatic antibody-mediated rejection in heart transplantation. *J Heart Lung Transplant*. 2012;31(1):46-51. Bacal F, Silva CP, Pires PV, Mangini S, Fiorelli AI, Stolf NG, Bocchi EA. Transplantation for Chagas disease: an overview of immunosuppression and reactivation in the last two decades. *Clin Transplant* 2010; 24: E29-E34. Bocchi EA, Fiorelli A. The paradox of survival results after heart transplantation for cardiomyopathy caused by *Trypanosoma cruzi*. First Guidelines Group for Heart Transplantation of the Brazilian Society of Cardiology. *Ann Thorac Surg*. 2001; 71(6):1833-8. Bacal F, Silva CP, Pires PV, Moreira L. F. P., ISSA, V. S., Moreira SA, Cruz, Fatima das Dores, Strabelli T, Stolf NAG, Bocchi, EA, Ramires, JAF. Mycophenolate mofetil increased chagas disease reactivation in heart transplanted patients: comparison between two different protocols.. *American Journal of Transplantation*. , V.5, p.2017 - 2021, 2005. Bocchi EA, Higuchi ML, Vieira MC, Stolf N, Bellotti G, Fiorelli A, Vip D, Jatene A, Pileggi F. Higher incidence of malignant neoplasms after heart transplantation for treatment of chronic Chagas's heart disease. *J Heart Lung Transplantation* 1998;17:399-405. Campos SV, Strabelli TM, Amato Neto V, Silva CP, Bacal F, Bocchi EA, Stolf NA. Risk factors for Chagas' disease reactivation after heart transplantation. *J Heart Lung Transplant*. 2008;27(6):597-602. Epub 2008 Apr 24. Morillo CA, Marin-Neto JA, Avezum A, Sosa-Estani S, Rassi A Jr, Rosas F, Villena E, Quiroz R, Bonilla R, Britto C, Guhl F, Velazquez E, Bonilla L, Meeks B, Rao-Melacini P, Pogue J, Mattos A, Lazdins J, Rassi A, Connolly SJ, Yusuf S; BENEFIT Investigators. Randomized Trial of Benznidazole for Chronic Chagas' Cardiomyopathy. *N Engl J Med*. 2015; 373(14):1295-306. US Kotton CN. CMV: Prevention, Diagnosis and Therapy. *Am J Transplant*. 2013; 13 Suppl 3:24-40. Kotton CN, Kumar D, Caliendo AM, Asberg A, Chou S, Danziger-Isakov L, Humar A; Transplantation Society International CMV Consensus Group. Updated international consensus guidelines on the management of cytomegalovirus in solid-organ transplantation. *Transplantation*. 2013; 96(4):333-60. Beam E, Razonable RR. Cytomegalovirus in solid organ transplantation: epidemiology, prevention, and treatment. *Curr Infect Dis Rep*. 2012; 14(6):633-41. Atabani SF, Smith C, Atkinson C, Aldridge RW, Rodriguez-Perálvarez M, Rolando N, Harber M, Jones G, O'Riordan A, Burroughs AK, Thorburn D, O'Beirne J, Milne RS, Emery VC, Griffiths PD. Cytomegalovirus replication kinetics in solid organ transplant recipients managed by preemptive therapy. *Am J Transplant*. 2012; 12(9):2457-64.

Idiomas ministrados:

Português

Tipo de oferecimento da disciplina:

Não-Presencial

Informações adicionais do oferecimento da disciplina:

A porcentagem da disciplina que ocorrerá no sistema não presencial (1-100%) - 100% Detalhamento das atividades que serão presenciais e das que serão desenvolvidas via remota, com discriminação do tempo de atividade contínua online. - Todas as aulas e seminários serão ministradas de forma on-line. Especificação se as aulas, quando online, serão síncronas ou assíncronas. -Síncronas • Descrição do tipo de material e/ou conteúdo que será disponibilizado para o aluno e a A plataforma que será utilizada. - Google meets Definição sobre a presença na Universidade e, quando necessária, discriminar quem deverá estar presente (professora/professor; aluna/aluno; ambos). - Será on-line. Descrição dos tipos e da frequência de interação entre aluna/aluno e professora/professor (somente durante as aulas; fora do período das aulas; horários; por chat/e-mail/fóruns ou outro). - A

assistência ao aluno será oferecida durante aula. A forma de controle da frequência nas aulas. - Presença durante todas as sessões com os professores (aulas e seminários) Informação sobre a obrigatoriedade ou não de disponibilidade de câmera e áudio (microfone) por parte dos alunos. - Câmeras e microfones abertos para a apresentação dos seminários e discussão após as aulas e seminários. A forma de avaliação da aprendizagem (presencial/remota). - Remota