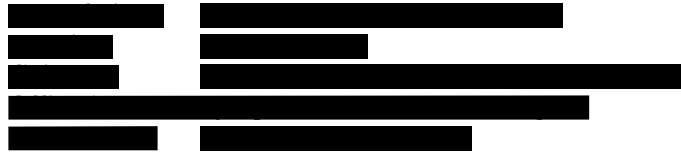


# PHILIPPE B. BERTRAND, MD MSc PhD



## DEGREES

2006	M.Sc.	Master in Civil Engineering – Biomechanics <i>magna cum laude</i>	Catholic University Leuven, Belgium
2010	M.D.	Medicine <i>magna cum laude</i>	Catholic University Leuven, Belgium
2016	Ph.D.	Doctor of Medical Sciences	Hasselt University, Belgium

## MEDICAL TRAINING & PROFESSIONAL APPOINTMENTS

08/2010 – 07/2011	Resident in Internal Medicine	University Hospital Leuven, Belgium
08/2011 – 07/2012	Resident in Internal Medicine	Ziekenhuis Oost-Limburg, Genk, Belgium
08/2012 – 07/2016	Resident in Cardiology	Ziekenhuis Oost-Limburg, Genk, Belgium
08/2016 – 07/2017	Resident in Cardiology	Jessa Hospital, Hasselt, Belgium
08/2017 – 07/2018	Resident in Cardiology	University Hospital Leuven, Belgium
08/2018 – 07/2020	Advanced Echocardiography Fellowship	Massachusetts General Hospital, Boston, MA
10/2020 – present	Staff Cardiologist	Ziekenhuis Oost-Limburg, Genk, Belgium

## RESEARCH POSITIONS

08/2012 – 07-2016	PhD research, Hasselt University, Belgium; FWO (Flemish Research Fund) aspirant grant 11N7214N: <i>“Importance of the subvalvular apparatus in functional mitral regurgitation: insights from in vitro and numerical modeling”</i>
08/2018 – 07/2020	Clinical & Research Fellow, Massachusetts General Hospital, Harvard Medical School, Boston, MA
12/2019 – present	Research Affiliate, Hasselt University, Belgium
08/2020 – 08/2022	Research Affiliate, Massachusetts General Hospital, Harvard Medical School, Boston, MA
02/2021 – present	Visiting Professor, Hasselt University, Belgium

## COMMITTEE SERVICES

2016 – present	Nucleus Member of the <b>Belgian Working Group</b> of Non-Invasive Cardiac Imaging (BWGNICI).
2018 – 2020	Member of the <b>Scientific Documents Committee</b> 2018-2020 of the European Association of Cardiovascular Imaging (EACVI).
2020 – 2022	Member of the <b>Scientific Documents Committee</b> 2020-2022 of the European Association of Cardiovascular Imaging (EACVI).
2020 – present	Member of the <b>Digital Health Task Force</b> of the European Association of Cardiovascular Imaging (EACVI).
2021 – present	<b>Belgian Ambassador</b> for the EACVI Heart Imagers of Tomorrow (HIT)
2021 – present	Nucleus Member of the <b>Young Cardiologists’ Club</b> of the Belgian Society of Cardiology (BSC)
2022 – present	Member of the <b>Scientific Documents Committee</b> 2022-2024 of the European Association of Cardiovascular Imaging (EACVI).

## LICENSURE AND CERTIFICATION

2016	European (EACVI) Certification in Adult Transthoracic Echocardiography (TTE)
2016	European (EACVI) Certification in Adult Transesophageal Echocardiography (TEE)

## HONORS AND PRIZES

2001	Finalist of the 13th Flemish Physics Olympiad 2001
2013	High Score Abstract – EuroEcho 2013, Istanbul, Turkey
2015	Best Poster Award (moderated poster) – Belgian Society of Cardiology, Brussels, Belgium
2015	Congress Highlight in 3D echocardiography, EuroEcho 2015, Sevilla, Spain
2015	Young Investigator Award – Belgian Working Group of Non-Invasive Cardiac Imaging (BWGNICI) Annual Symposium, Bruges, Belgium
2016	Best Imaging Abstract – Belgian Society of Cardiology, Brussels, Belgium
2016	J. Roelandt Young Investigator Award of the European Association of Cardiovascular Imaging (EACVI) – EuroEcho 2016, Leipzig, Germany
2017	Jacqueline Bernheim Prize (25,000€) for PhD Thesis – Brussels, Belgium

## GRANTS

2012	BOF/DOC research grant, Bijzonder Onderzoeksfonds, Hasselt University
2013	FWO (Flemish Research Fund) Aspirant grant 11N7214N: “Importance of the subvalvular apparatus in functional mitral regurgitation: insights from in vitro and numerical modeling”
2014	FWO Travel Grant K225614N: Research visit at Massachusetts General Hospital, Harvard Medical School, Boston, MA (prof. R.A. Levine)
2014	FWO Travel Grant K1G9114N: Abstract presentation, American Heart Association, Chicago, IL
2015	FWO Aspirant grant 11N7214N renewal.
2018	Rotary International Global Grant GG1875147 : Clinical & Research Fellowship at Massachusetts General Hospital, Harvard Medical School, Boston, MA
2023	Promotor of PhD research awarded an FWO aspirant grant 11PGA24N (S. Dhont, MD)

## SCIENTIFIC WORK

(Co-)author of >74 peer reviewed publications and 4 book chapters (see list attached), including original research papers in Tier 1 journals as the *Journal of the American College of Cardiology*, *European Heart Journal*, *Circulation*, *Journal of Thoracic and Cardiovascular Surgery*, *Journal of the American Society of Echocardiography*.

Peer reviewer for various cardiology journals as the *Journal of the American College of Cardiology*, *Circulation*, *European Heart Journal*, *European Heart Journal – Cardiovascular Imaging*, *Circulation: Cardiovascular Imaging*, *JACC Imaging*, *Journal of the American Society of Echocardiography*, *Journal of the American Heart Association*, *Heart*, *American Journal of Cardiology*, *Annals of Thoracic Surgery*, *Journal of Heart Valve Disease*.

**Editorial board member** for *Acta Cardiologica* and *European Heart Journal – Imaging Methods & Practice*.

**Abstract presentations** at national and international conferences, including oral presentations at American Heart Association (AHA) conference (Philadelphia, 2019), Heart Valve Society (Monaco, 2015), Belgian Society of Cardiology (BSC, 2014-2016), Belgian Working Group for Non-Invasive Cardiovascular Imaging (BWGNICI, 2016); moderated poster presentations at American College of Cardiology (ACC) congress (Washington 2015 and Chicago 2020) and poster presentations at numerous BSC, ACC, AHA, EACVI and European Society of Cardiology (ESC) conferences.

**Invited speaker** at numerous national and international conferences, including among others invited lectures at EuroEcho 2015 (Sevilla), EuroEcho 2016 (Leipzig), EuroEcho 2018 (Milan), EuroEcho 2019 (Vienna), the American Society of Echocardiography 2019 (Portland, USA), EuroEcho 2021, EACVI (Barcelona) 2023, HFA (Prague) 2023, PCR Imaging Valves (Madrid) 2023 and 2024, EuroValve (Milan) 2023, ESC (Amsterdam) 2023, Korean Society of Echocardiography (Seoul 2023), EACVI HIT Summer School (Dubrovnik 2024).

**Visiting Professor** at Hasselt University, Belgium since 2021.

- Promotor of PhD research supported by the Flemish Research Fund.
- Supervisor of several bachelor and master’s student research projects.
- Mentor in the UHasselt mentorship program for medical students.

## LIST OF PUBLICATIONS

### Papers published in international peer-reviewed journals

1. Verwerft J, Stassen J, Falter M, Bekhuis Y, Hoedemakers S, Gojevic T, Ferreira SM, Vanhentenrijk S, Stroobants S, Jogani S, Hansen D, Jasaityte R, Cosyns B, Van De Bruaene A, **Bertrand PB**, de Boer RA, Gevaert AB, Verbrugge FH, Herbots L, Claessen G. Clinical Significance of Exercise Pulmonary Hypertension With a Negative Diastolic Stress Test for Suspected Heart Failure With Preserved Ejection Fraction. *J Am Heart Assoc*. 2024 Aug 6;13(15):e032228. doi: 10.1161/JAHA.123.032228. Epub 2024 Jul 19.
2. Dhont S, **Bertrand PB**. Left Atrium in Mitral Valve Prolapse: An Additional Piece to the Complex Puzzle. *Circ Cardiovasc Imaging*. 2024 Jun;17(6):e017014. doi: 10.1161/CIRCIMAGING.124.017014. Epub 2024 Jun 11.
3. Adrichem R, Hokken TW, Bouwmeester S, Abdelkarim O, Vogel B, Blusztajn DI, Veulemans V, Kuneman JH, Geleijnse ML, Verhemel S, Van den Dorpel MMP, Kardys I, Tonino PAL, Chang SM, Faza NN, Jou S, Ueyama HA, Bartkowiak J, Zeus T, Bax JJ, **Bertrand PB**, Hahn RT, Kodali SK, Lerakis S, Mehran R, Little SH, Houthuizen P, Van Mieghem NM. Diagnostic Value of Aortic Valve Calcification Levels in the Assessment of Low-Gradient Aortic Stenosis. *JACC Cardiovasc Imaging*. 2024 Aug;17(8):847-860. doi: 10.1016/j.jcmg.2024.03.014. Epub 2024 May 22.
4. Dhont S, Verbrugge FH, Verwerft J, **Bertrand PB**. Non-invasive imaging in acute decompensated heart failure with preserved ejection fraction. *Eur Heart J Acute Cardiovasc Care*. 2024 Jul 24;13(7):575-582. doi: 10.1093/ehjacc/zuae041.
5. Dhont S, van den Acker G, van Loon T, Verbrugge FH, Verwerft J, Deferm S, Churchill TW, Mullens W, Lumens J, **Bertrand PB**. Mitral regurgitation in heart failure with preserved ejection fraction: The interplay of valve, ventricle, and atrium. *Eur J Heart Fail*. 2024 Apr;26(4):974-983. doi: 10.1002/ejhf.3231. Epub 2024 Apr 17.
6. Hoedemakers S, Pugliese NR, Stassen J, Vanoppen A, Claessens J, Gojevic T, Bekhuis Y, Falter M, Moura Ferreira S, Dhont S, De Biase N, Del Punta L, Di Fiore V, De Carlo M, Giannini C, Colli A, Dulgheru RE, Geers J, Yilmaz A, Claessen G, **Bertrand P**, Droogmans S, Lancellotti P, Cosyns B, Verbrugge FH, Herbots L, Masi S, Verwerft J. mPAP/CO Slope and Oxygen Uptake Add Prognostic Value in Aortic Stenosis. *Circulation*. 2024 Apr 9;149(15):1172-1182. doi: 10.1161/CIRCULATIONAHA.123.067130. Epub 2024 Feb 27.
7. Pype LL, **Bertrand PB**, Debonnaire P, Dhont S, Hoekman B, Paelinck BP, De Bock D, Heidbuchel H, Van Craenenbroeck EM, Van De Heyning CM. Mitral Valve Surgery for Mitral Regurgitation Results in Reduced Left Ventricular Ejection Fraction in Barlow's Disease as Compared with Fibro-Elastic Deficiency. *J Cardiovasc Dev Dis*. 2024 Feb 21;11(3):71. doi: 10.3390/jcdd11030071.
8. Murphy SP, Deferm S, Yucel E, Urbut SM, Hung J, Dal-Bianco JP, **Bertrand PB**, Churchill TW. Right Ventricular-Pulmonary Arterial Coupling and All-Cause Mortality in Patients with Mitral Annular Calcification-Related Mitral Valve Dysfunction. *J Am Soc Echocardiogr*. 2024 Apr;37(4):474-476. doi: 10.1016/j.echo.2024.01.008. Epub 2024 Jan 20.
9. Meekers E, Petit T, Dauw J, Gruwez H, Dhont S, Luwel E, Nijst P, Dupont M, **Bertrand PB**, Martens P, Mullens W. Analysing the accuracy of pressure measurements during exercise with pulmonary artery pressure sensors - Insights from the ACTION-MEMS study. *Eur J Heart Fail*. 2024 Feb;26(2):523-524. doi: 10.1002/ejhf.3124. Epub 2024 Jan 11.
10. Dhont S, Stassen J, Herbots L, Hoedemakers S, Bekhuis Y, Jasaityte R, Stroobants S, Petit T, Bakelants E, Falter M, Ferreira SM, Claessen G, Nijst P, Vandervoort PM, **Bertrand PB\***, Verwerft J. Exercise pulmonary hypertension by the mPAP/CO slope in primary mitral regurgitation. *Eur Heart J Cardiovasc Imaging*. 2024 Mar 27;25(4):530-538. doi: 10.1093/ehjci/jead313.
11. Namasivayam M, **Bertrand PB\***, Bernard S, Churchill TW, Khurshid S, Marcus FI, Mestroni L, Saffitz JE, Towbin JA, Zareba W, Picard MH, Sanborn DY; North American ARVC Registry. Utility of Left and Right Ventricular Strain in Arrhythmogenic Right Ventricular Cardiomyopathy: A Prospective Multicenter Registry. *Circ Cardiovasc Imaging*. 2023 Dec;16(12):e015671. doi: 10.1161/CIRCIMAGING.123.015671. Epub 2023 Dec 19.
12. Gruwez H, Verbrugge FH, Proesmans T, Evens S, Vanacker P, Rutgers MP, Vanhooren G, **Bertrand P**, Pison L, Haemers P, Vandervoort P, Nuyens D. Smartphone-based atrial fibrillation screening in the general population: feasibility and impact on medical treatment. *Eur Heart J Digit Health*. 2023 Sep 30;4(6):464-472. doi: 10.1093/ehjdh/ztad054.
13. Deferm S, **Bertrand PB**, Dhont S, von Bardeleben RS, Vandervoort PM Arrhythmia-Mediated Valvular Heart Disease. *Heart Fail Clin*. 2023 Jul;19(3):357-377. doi: 10.1016/j.hfc.2023.02.008.
14. Dhont S, Wouters F, Deferm S, Bekelaar K, Gruwez H, Meekers E, Nuyens D, Verhaert D, Vandervoort P, **Bertrand PB**. Reduced Left Atrial Appendage Flow Is Associated With Future Atrial Fibrillation After Cryptogenic Stroke. *J Am Soc Echocardiogr*. 2023 May 15;S0894-7317(23)00195-5. doi: 10.1016/j.echo.2023.04.004.
15. Nagata Y, **Bertrand PB\***, Baliyan V, Kochav J, Kagan RD, Ujka K, Alfraidi H, van Kampen A, Morningstar JE, Dal-Bianco JP, Melnitchouk S, Holmvang G, Borger MA, Moore R, Hua L, Sultana R, Calle PV, Yum B, Guerrero JL, Neilan TG, Picard MH, Kim J, Dellling FN, Hung J, Norris RA, Weinsaft JW, Levine RA. Abnormal Mechanics Relate to Myocardial Fibrosis and Ventricular Arrhythmias in Patients With Mitral Valve Prolapse. *Circ Cardiovasc Imaging*. 2023 Apr;16(4):e014963. doi: 10.1161/CIRCIMAGING.122.014963. Epub 2023 Apr 18.
16. Churchill TW, Yucel E, Bernard S, Namasivayam M, Nagata Y, Lau ES, Deferm S, He W, Danik JS, Sanborn DY, Picard MH, Levine RA, Hung J, **Bertrand PB**. Sex Differences in Extensive Mitral Annular Calcification With Associated Mitral Valve Dysfunction. *Am J Cardiol*. 2023 Apr 15;193:83-90. doi: 10.1016/j.amjcard.2023.02.005. Epub 2023 Mar 5.

17. Verwerft J, **Bertrand PB**, Claessen G, Herbots L, Verbrugge FH. Cardiopulmonary Exercise Testing With Simultaneous Echocardiography: Blueprints of a Dyspnea Clinic for Suspected HFpEF. *JACC Heart Fail.* 2023 Feb;11(2):243-249. doi: 10.1016/j.jchf.2022.11.004.
18. Churchill TW, Yucel E, Deferm S, Levine RA, Hung J, **Bertrand PB**. Mitral Valve Dysfunction in Patients With Annular Calcification: JACC Review Topic of the Week. *J Am Coll Cardiol.* 2022 Aug 16;80(7):739-751. doi: 10.1016/j.jacc.2022.05.032.
19. Bernard S, Deferm S, **Bertrand PB**. Acute valvular emergencies. *Eur Heart J Acute Cardiovasc Care.* 2022 Aug 9;11(8):653-665. doi: 10.1093/ehjacc/zuac086.
20. Vandemaele P, Vander Linden K, Deferm S, Jashari R, Rega F, **Bertrand P**, Vandervoort P, Vander Sloten J, Famaey N, Fehervary H. Alterations in Human Mitral Valve Mechanical Properties Secondary to Left Ventricular Remodeling: A Biaxial Mechanical Study. *Front Cardiovasc Med.* 2022 Jun 9;9:876006. doi: 10.3389/fcvm.2022.876006.
21. Nagata Y, **Bertrand PB**, Levine RA. Malignant Mitral Valve Prolapse: Risk and Prevention of Sudden Cardiac Death. *Curr Treat Options Cardiovasc Med.* 2022 May;24(5):61-86. doi: 10.1007/s11936-022-00956-3.
22. Pype LL, **Bertrand PB**, Paelinck BP, Heidebuchel H, Van Craenenbroeck EM, Van De Heyning CM. Left Ventricular Remodeling in Non-syndromic Mitral Valve Prolapse: Volume Overload or Concomitant Cardiomyopathy? *Front Cardiovasc Med.* 2022 Apr 12;9:862044. doi: 10.3389/fcvm.2022.862044.
23. Deferm S, **Bertrand PB**, Verhaert D, Verbrugge FH, Dauw J, Thoelen K, Giesen A, Bruckers L, Rega F, Thomas JD, Levine RA, Vandervoort PM. Mitral Annular Dynamics in AF Versus Sinus Rhythm: Novel Insights Into the Mechanism of AFMR. *JACC Cardiovasc Imaging.* 2022 Jan;15(1):1-13. doi: 10.1016/j.jcmg.2021.05.019.
24. Martens P, Dupont M, Dauw J, Nijst P, **Bertrand PB**, Tang WHW, Mullens W. The effect of intravenous ferric carboxymaltose on right ventricular function - insights from the IRON-CRT trial. *Eur J Heart Fail.* 2022 Jun;24(6):1106-1113. doi: 10.1002/ejhf.2489.
25. Deferm S, **Bertrand PB**, Yucel E, Bernard S, Namasivayam M, Nagata Y, Dal-Bianco JP, Sanborn DY, Picard MH, Levine RA, Hung J, Churchill TW. Impact of Pulmonary Hypertension on Outcomes in Patients With Mitral Annular Calcium and Associated Mitral Valve Dysfunction. *Am J Cardiol.* 2022 Jan 3:S0002-9149(21)01198-X. doi: 10.1016/j.amjcard.2021.11.047.
26. Morningstar JE, Gensemer C, Moore R, Fulmer D, Beck TC, Wang C, Moore K, Guo L, Sieg F, Nagata Y, **Bertrand P**, Spampinato RA, Glover J, Poelzing S, Gourdie RG, Watts K, Richardson WJ, Levine RA, Borger MA, Norris RA. Mitral Valve Prolapse Induces Regionalized Myocardial Fibrosis. *J Am Heart Assoc.* 2021 Dec 21;10(24):e022332. doi: 10.1161/JAHA.121.022332. Epub 2021 Dec 7.
27. **Bertrand PB**, Overbey JR, Zeng X, Levine RA, Ailawadi G, Acker MA, Smith PK, Thourani VH, Bagiella E, Miller MA, Gupta L, Mack MJ, Gillinov AM, Giustino G, Moskowitz AJ, Gelijns AC, Bowdish ME, O'Gara PT, Gammie JS, Hung J; Cardiothoracic Surgical Trials Network (CTSNet). Progression of Tricuspid Regurgitation After Surgery for Ischemic Mitral Regurgitation. *J Am Coll Cardiol.* 2021; 77(6):713-724. doi: 10.1016/j.jacc.2020.11.066.
28. Deferm S, **Bertrand PB**, Verhaert D, Dauw J, Van Keer JM, Van De Bruaene A, Herregods MC, Meuris B, Verbrugge P, Rex S, Vandervoort PM, Rega F. Outcome and durability of mitral valve annuloplasty in atrial secondary mitral regurgitation. *Heart.* 2021 Sep;107(18):1503-1509. doi: 10.1136/heartjnl-2021-319045.
29. Dauw J, Martens P, Deferm S, **Bertrand P**, Nijst P, Hermans L, Van den Bergh M, Housen I, Hijit A, Warnants M, Cottens D, Ferdinande B, Vrolix M, Dens J, Ameloot K, Dupont M, Mullens W. Left ventricular function recovery after ST-elevation myocardial infarction: correlates and outcomes. *Clin Res Cardiol.* 2021 Sep;110(9):1504-1515. doi: 10.1007/s00392-021-01887-y. Epub 2021 Jun 5.
30. **Bertrand PB**, Churchill TW, Yucel E, Namasivayam M, Bernard S, Nagata Y, He W, Andrews CT, Picard MH, Weyman AE, Levine RA, Hung J. Prognostic importance of the transmitral pressure gradient in mitral annular calcification with associated mitral valve dysfunction. *Eur Heart J.* 2020 Dec 1;41(45):4321-4328.
31. Bernard S, Churchill TW, Namasivayam M, **Bertrand PB**. Agitated Saline Contrast Echocardiography in the Identification of Intra- and Extracardiac Shunts: Connecting the Dots. *J Am Soc Echocardiogr.* 2020
32. Deferm S, Dauw J, Vandervoort PM, **Bertrand PB**. Atrial Functional Mitral and Tricuspid Regurgitation. *Curr Treat Options Cardiovasc Med.* 2020; 22 (10), 1-14
33. Deferm S, **Bertrand PB**, Churchill TW, Sharma R, Vandervoort PM, Schwamm LH, Yoerger Sanborn DM. Left Atrial Mechanics Assessed Early during Hospitalization for Cryptogenic Stroke Are Associated with Occult Atrial Fibrillation: A Speckle-Tracking Strain Echocardiography Study. *J Am Soc Echocardiogr.* 2020 Oct 29:S0894-7317(20)30601-5. doi: 10.1016/j.echo.2020.09.009.
34. **Bertrand PB**, Nagata Y, Namasivayam M, Levine RA. The Artifact that Tells the Truth: Color Doppler Splay Unmasking Significant Mitral Regurgitation. *J Am Soc Echocardiogr.* 2020 Oct;33(10):1220-1222.
35. Yucel E, **Bertrand PB**, Churchill JL, Namasivayam M. The tricuspid valve in review: anatomy, pathophysiology and echocardiographic assessment with focus on functional tricuspid regurgitation. *J Thorac Dis.* 2020 May;12(5):2945-2954.
36. Churchill TW, **Bertrand PB**, Bernard S, Namasivayam M, Churchill J, Crousillat D, Davis EF, Hung J, Picard MH. Echocardiographic Features of COVID-19 Illness and Association with Cardiac Biomarkers. *J Am Soc Echocardiogr.* 2020 Aug;33(8):1053-1054.

37. Nijst P, Martens P, Dauw J, Tang WHW, **Bertrand PB**, Penders J, Bruckers L, Voros G, Willems R, Vandervoort PM, Dupont M, Mullens W. Withdrawal of Neurohumoral Blockade After Cardiac Resynchronization Therapy. *J Am Coll Cardiol*. 2020 Mar 31;75(12):1426-1438.
38. Deferm S, Martens P, Verbrugge FH, **Bertrand PB**, Dauw J, Verhaert D, Dupont M, Vandervoort PM, Mullens W. LA Mechanics in Decompensated Heart Failure: Insights From Strain Echocardiography With Invasive Hemodynamics. *JACC Cardiovasc Imaging*. 2020 May;13(5):1107-1115.
39. **Bertrand PB**, Hung J. Bicaval Valve Implantation for Severe Tricuspid Regurgitation: Thinking Outside the Valve Box. *JACC: Case Reports* 1 (5), 725-726
40. Yucel E, Al-Bawardy R, **Bertrand PB**. Pulmonary Hypertension in Patients Eligible for Transcatheter Mitral Valve Repair: Prognostic Impact and Clinical Implications. *Curr Treat Options Cardiovasc Med*. 2019 Sep 10; 21(10):60.
41. **Bertrand PB**, Churchill TW, Passeri JJ. A left atrial mitral valve chord. *JACC: Case Reports* 2 (4), 526-527
42. Martens P, Deferm S, **Bertrand PB**, Verbrugge FH, Ramaekers J, Verhaert D, Dupont M, Vandervoort PM, Mullens W. The Detrimental Effect of RA Pacing on LA Function and Clinical Outcome in Cardiac Resynchronization Therapy. *JACC Cardiovasc Imaging*. 2019 Jul 17.
43. Deferm S, **Bertrand PB**, Verbrugge FH, Verhaert D, Rega F, Thomas JD, Vandervoort PM. Atrial Functional Mitral Regurgitation: JACC Review Topic of the Week. *J Am Coll Cardiol*. 2019 05 21; 73(19):2465-2476.
44. **Bertrand PB**, Mihos CG, Yucel E. Mitral Annular Calcification and Calcific Mitral Stenosis: Therapeutic Challenges and Considerations. *Curr Treat Options Cardiovasc Med*. 2019 Mar 30; 21(4):19.
45. **Bertrand PB**, Namasivayam M. Left ventricular assist device after percutaneous mitral valve repair: Can we go there? *Int J Cardiol*. 2019 08 01; 288:55-56.
46. Martens P, Verbrugge FH, **Bertrand PB**, Verhaert D, Vandervoort P, Dupont M, Tang WHW, Janssens S, Mullens W. Effect of Cardiac Resynchronization Therapy on Exercise-Induced Pulmonary Hypertension and Right Ventricular-Arterial Coupling. *Circ Cardiovasc Imaging*. 2018 09; 11(9):e007813.
47. **Bertrand PB**, Habran M, Kenis K, Lecomte J, Moonen L, Stroobants D, Benit E. Dual antiplatelet therapy after percutaneous left atrial appendage occlusion: single center experience with the Amplatzer Cardiac Plug. *Acta Cardiol*. 2019 Feb; 74(1):74-81.
48. Canè F, Verheghe B, De Beule M, **Bertrand PB**, Van der Geest RJ, Segers P, De Santis G. From 4D Medical Images (CT, MRI, and Ultrasound) to 4D Structured Mesh Models of the Left Ventricular Endocardium for Patient-Specific Simulations. *Biomed Res Int*. 2018; 2018:703-718.
49. Verbrugge FH, **Bertrand PB**, Willems E, Gielen E, Mullens W, Giri S, Tang WH, Raman SV, Verhaert D. Myocardial Edema in Advanced Decompensated Heart Failure. *Eur Heart J Cardiovasc Imaging*. 2017 Jul 01; 18(7):787-794.
50. Nijst P, Verbrugge FH, Martens P, **Bertrand PB**, Dupont M, Francis GS, Tang WW, Mullens W. Plasma renin activity in patients with heart failure and reduced ejection fraction on optimal medical therapy. *J Renin Angiotensin Aldosterone Syst*. 2017 Jul-Sep; 18(3).
51. Martens P, Verbrugge FH, Nijst P, **Bertrand PB**, Dupont M, Tang WH, Mullens W. Feasibility and Association of Neurohumoral Blocker Up-titration After Cardiac Resynchronization Therapy. *J Card Fail*. 2017 Aug; 23(8):597-605.
52. **Bertrand PB**, Schwammenthal E, Levine RA, Vandervoort PM. The Dynamics of Secondary Mitral Regurgitation: Pathophysiology and Therapeutic Implications. *Circulation*. 2017 Jan 17;135(3):297-314.
53. **Bertrand PB**, Pettinari M, De Cannière H, Smeets CJ, Gutermann H, Verhaert D, Dion RA, Verdonck PR, Vandervoort PM. Effective Orifice Area During Exercise After Mechanical Valve Replacement. *J Am Soc Echocardiogr*. 2017 Apr;30(4):404-413.
54. **Bertrand PB**, Vandervoort PM. Subclinical Myocardial Dysfunction in Asymptomatic Mitral Regurgitation: "Watchful Waiting 2.0". *J Am Coll Cardiol*. 2016 Nov 1;68(18):1987-1989.
55. Van De Heyning CM\*, **Bertrand PB\***, Debonnaire P, De Maeyer C , Vandervoort PM, Coussement P, Paelinck B, De Bock D, Vrints C , Claeys MJ. Mechanism of symptomatic improvement after MitraClip therapy for secondary mitral regurgitation: the role of improved resting and exercise hemodynamics. *J Am Coll Cardiol*. 2016 Jul 5;68(1):128-9. (\*shared first author)
56. Nijst P, Verbrugge FH, **Bertrand PB**, Martens P, Dupont M, Drieskens O, Penders J, Tang WH, Mullens W. Plasma Volume Is Normal but Heterogeneously Distributed, and True Anemia Is Highly Prevalent in Patients With Stable Heart Failure. *J Card Fail*. 2017 Feb;23(2):138-144.
57. Smeets CJ, Lanssens D, Gyselaers W, **Bertrand PB**, Grieten L, Vandervoort P. Detection of subclinical transient fluid accumulation during pregnancy in a patient with an implantable cardioverter defibrillator and OptiVol® fluid monitoring algorithm. *Int J Cardiol*. 2016 2016 Jul 1;214:163-5
58. Hendrickx I, **Bertrand PB**, Vrolix M, Ferdinande B, Cruysberghs Y. Papillary fibro-elastoma as a rare cause of rate-dependent angina: importance of diastolic coronary perfusion. *Eur Heart J Cardiovasc Imaging*. 2016 Jun;17(6):632.
59. **Bertrand PB**, Levine RA, Isselbacher EM, Vandervoort PM. Fact or Artifact in Two-Dimensional Echocardiography: Avoiding Misdiagnosis and Missed Diagnosis. *J Am Soc Echocardiogr*. 2016 May;29(5):381-91. Review.

60. Pettinari M, **Bertrand PB**, Van Kerrebroeck C, Vandervoort P, Gutermann H, Dion R. Mid-term results of leaflet augmentation in severe tricuspid functional tethering. *Eur J Cardiothorac Surg*. 2016 Sep;50(3):504-8.
61. **Bertrand PB**, Verhaert D, Vandervoort PM. Mirror artifacts in two-dimensional echocardiography: Don't forget the third dimension. *J Am Soc Echocardiogr*. 2015 Nov;28(11):1376-7.
62. **Bertrand PB**, Vandervoort PM, Dion RA. Surgical treatment of moderate ischemic mitral regurgitation. *N Engl J Med*. 2015 Apr 30;372(18):1771. Letter
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