

## CURRICULUM VITAE

**NAME AND SURNAME:** *LUIS NOMBELA FRANCO*  
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**BIBLIOGRAPHIC CITATION** Nombela-Franco L; Nombela L

### ACADEMIC AND WORK EXPERIENCE

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- 1997-2003: Qualified in Medicine (MD). Universidad Autónoma de Madrid.
- *August* 2000: Elective rotation in Grampian University Hospitals in department of Medicine for the elderly. Aberdeen (United Kingdom)
- *August* 2001: Elective rotation in Central Manchester and Manchester Children's University Hospitals NHS Trust in Department of Cardiology. Manchester (United Kingdom)
- *May 2005-May 2010*: Cardiology training in *Puerta de Hierro* General University Hospital in Cardiology Department (Madrid, Spain).
- *February to August* 2009: Elective rotation in Klinikum Darmstadt, Germany in the catheterization laboratory of Prof. Gerald Werner:
- *May 2010 to april 2011*: fellowship in interventional cardiology in *Puerta de Hierro* University Hospital.
- *April 2011-July 2013*: fellowship in interventional and structural cardiology in Quebec Heart & Lung Institute, Laval University, Quebec (Canada) under the supervision of Dr. Rodés-Cabau.
- *April 2016*: PhD degree in Autonomia University of Madrid, (Spain) with the qualification of "outstanding".
- *July 2013- present*: Interventional Cardiologist and structural heart disease program coordinator at Hospital Clínico San Carlos de Madrid (Spain).

### SCHOLARSHIPS, AWARDS, AND CERTIFICATIONS

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- 2010: Spanish board of Clinical Cardiology
- 2010: Prize for the best resident in Puerta de Hierro University Hospital.
- 2010: Spanish Scholarship from Spanish Society of Cardiology for junior interventional cardiologist
- 2011: Scholarship from Foundation Alfonso Martin Escudero Madrid (Spain) for research and fellowship at Quebec Heart and Lung Institute (Canadá).
- 2013: Scholarship from Foundation Mutua Madrileña (Spain) for research at Quebec Heart and Lung Institute (Canadá).
- 2013: Prize for health project from the Fonds de recherché de Quebec (Canadá).
- 2014: Prize from the Royal Academy of Medicine of Spain for the best cardiology article published in 2012.
- 2015: Third prize from Spanish Society of interventional cardiologist for best published article
- 2016: First prize from Spanish Society of interventional cardiologist for best published article

- 2016: First prize from Real Academia de Doctores de España for the best thesis in health sciences.
- 2016: First prize from Hospital Clínico San Carlos for the best published article in 2015.
- 2018: Finalist for the Thomas J. Linnemeier Spirit of Interventional Cardiology Young Investigator Award.
- 2018: Scholarship from Instituto Carlos III (Beca FIS number: FIS.181297)

## MOST IMPORTANT PUBLICATIONS

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As a First Author:

1. Cerebral embolic protection devices during transcatheter aortic valve implantation: clinical versus silent embolism.  
Nombela-Franco L, Armijo G, Tirado-Conte G.J Thorac Dis. 2018 Nov;10(Suppl 30):S3604-S3613. doi: 10.21037/jtd.2018.09.62.PMID: 30505542Free PMC article.Review.
2. New Valves May Overcome Weaknesses of Transcatheter Aortic Valve Replacement.  
Nombela-Franco L.J Am Coll Cardiol. 2017 Dec 26;70(25):3137-3139. doi: 10.1016/j.jacc.2017.10.074.PMID: 29268927No abstract available.
3. Ischemic Cardiomyopathy and Chronic Total Occlusions: Poor Prognosis, Worse in Combination.  
Nombela-Franco L, Ryan N.JACC Cardiovasc Interv. 2016 Sep 12;9(17):1798-800. doi: 10.1016/j.jcin.2016.07.011.PMID: 27609253No abstract available.
4. Incidence, Predictors, and Prognostic Value of Acute Kidney Injury Among Patients Undergoing Left Atrial Appendage Closure.  
Nombela-Franco L, Rodés-Cabau J, Cruz-Gonzalez I, Freixa X, Asmarats L, Gutiérrez H, Sahay S, Rodriguez-Gabella T, Moreno-Samos JC, Tirado-Conte G, Goncalves-Ramirez LR, Rama-Merchan JC, Amat-Santos IJ, O'Hara G, Martín-Yuste V, Bethencourt A, Jimenez-Quevedo P, Macaya C.JACC Cardiovasc Interv. 2018 Jun 11;11(11):1074-1083. doi: 10.1016/j.jcin.2018.03.022.PMID: 29880102Clinical Trial.
5. Role of balloon postdilation following transcatheter aortic valve implantation.  
Nombela-Franco L, Barbosa Ribeiro H, Allende R, Urena M, Doyle D, Dumont E, Delarochellière R, Rodés-Cabau J.Minerva Cardioangiol. 2013 Oct;61(5):499-512.PMID: 24096245Review.
6. Advances in percutaneous treatment of mitral regurgitation.  
Nombela-Franco L, Urena M, Ribeiro HB, Rodés-Cabau J.Rev Esp Cardiol (Engl Ed). 2013 Jul;66(7):566-82. doi: 10.1016/j.rec.2013.02.014. Epub 2013 Jun 5.PMID: 24776207Review.
7. Clinical impact and evolution of mitral regurgitation following transcatheter aortic valve replacement: a meta-analysis.  
Nombela-Franco L, Eltchaninoff H, Zahn R, Testa L, Leon MB, Trillo-Nouche R, D'Onofrio A, Smith CR, Webb J, Bleiziffer S, De Chiara B, Gilard M, Tamburino C, Bedogni F, Barbanti M, Salizzoni S, García del Blanco B, Sabaté M, Moreo A,

- Fernández C, Ribeiro HB, Amat-Santos I, Urena M, Allende R, García E, Macaya C, Dumont E, Pibarot P, Rodés-Cabau J. *Heart*. 2015 Sep;101(17):1395-405. doi: 10.1136/heartjnl-2014-307120. Epub 2015 Jun 9. PMID: 26060121 Review.
8. Significant mitral regurgitation left untreated at the time of aortic valve replacement: a comprehensive review of a frequent entity in the transcatheter aortic valve replacement era.  
Nombela-Franco L, Ribeiro HB, Urena M, Allende R, Amat-Santos I, DeLarochellière R, Dumont E, Doyle D, DeLarochellière H, Laflamme J, Laflamme L, García E, Macaya C, Jiménez-Quevedo P, Côté M, Bergeron S, Beaudoin J, Pibarot P, Rodés-Cabau J. *J Am Coll Cardiol*. 2014 Jun 24;63(24):2643-58. doi: 10.1016/j.jacc.2014.02.573. Epub 2014 Mar 26. PMID: 24681140 Review.
  9. Impact of Chronic Total Coronary Occlusion on Recurrence of Ventricular Arrhythmias in Ischemic Secondary Prevention Implantable Cardioverter-Defibrillator Recipients (VACTO Secondary Study): Insights From Coronary Angiogram and Electrogram Analysis.  
Nombela-Franco L, Iannaccone M, Anguera I, Amat-Santos IJ, Sanchez-Garcia M, Bautista D, Calvelo MN, Di Marco A, Moretti C, Pozzi R, Scaglione M, Cañadas V, Sandin-Fuentes M, Arenal A, Bagur R, Perez-Castellano N, Fernandez-Perez C, Gaita F, Macaya C, Escaned J, Fernández-Lozano I. *JACC Cardiovasc Interv*. 2017 May 8;10(9):879-888. doi: 10.1016/j.jcin.2017.02.008. PMID: 28473110 Clinical Trial.
  10. [PubMed: ]  
Nombela-Franco L. *Rev Esp Cardiol*. 2009 Mar;62(3):332. doi: 10.1016/S0300-8932(09)70383-5. Epub 2009 Mar 19. PMID: 23040484 English, Spanish. No abstract available.
  11. [Torsades de pointes associated with rupertadine].  
Nombela-Franco L, Ruiz-Antoran B, Toquero-Ramos J, Silva-Melchor L. *Rev Esp Cardiol*. 2008 Mar;61(3):328-9. PMID: 18361911 Spanish. No abstract available.
  12. Incidence, Causes, and Predictors of Early ( $\leq 30$  Days) and Late Unplanned Hospital Readmissions After Transcatheter Aortic Valve Replacement.  
Nombela-Franco L, del Trigo M, Morrison-Polo G, Veiga G, Jimenez-Quevedo P, Abdul-Jawad Altisent O, Campelo-Parada F, Biagioni C, Puri R, DeLarochellière R, Dumont E, Doyle D, Paradis JM, Quirós A, Almeria C, Gonzalo N, Nuñez-Gil I, Salinas P, Mohammadi S, Escaned J, Fernández-Ortiz A, Macaya C, Rodés-Cabau J. *JACC Cardiovasc Interv*. 2015 Nov;8(13):1748-57. doi: 10.1016/j.jcin.2015.07.022. PMID: 26476610 Clinical Trial.
  13. Incidence, predictive factors and haemodynamic consequences of acute stent recoil following transcatheter aortic valve implantation with a balloon-expandable valve.  
Nombela-Franco L, Ribeiro HB, Urena M, Pasian S, Allende R, Doyle D, Delarochellière R, Delarochellière H, Laflamme L, Laflamme J, Jerez-Valero M, Côté M, Pibarot P, Larose E, Dumont E, Rodés-Cabau J. *EuroIntervention*. 2014;9(12):1398-406. doi: 10.4244/EIJV9I12A237. PMID: 24064535
  14. Predictive factors, efficacy, and safety of balloon post-dilation after transcatheter aortic valve implantation with a balloon-expandable valve.  
Nombela-Franco L, Rodés-Cabau J, DeLarochellière R, Larose E, Doyle D, Villeneuve J, Bergeron S, Bernier M, Amat-Santos IJ, Mok M, Urena M, Rheault M, Dumesnil J, Côté M, Pibarot P, Dumont E. *JACC Cardiovasc Interv*. 2012 May;5(5):499-512. doi: 10.1016/j.jcin.2012.02.010. PMID: 22625188

15. Validation of the J-chronic total occlusion score for chronic total occlusion percutaneous coronary intervention in an independent contemporary cohort. Nombela-Franco L, Urena M, Jerez-Valero M, Nguyen CM, Ribeiro HB, Bataille Y, Rodés-Cabau J, Rinfret S. *Circ Cardiovasc Interv.* 2013 Dec;6(6):635-43. doi: 10.1161/CIRCINTERVENTIONS.113.000447. Epub 2013 Nov 19. PMID: 24254710
16. Comparison of hemodynamic performance of self-expandable CoreValve versus balloon-expandable Edwards SAPIEN aortic valves inserted by catheter for aortic stenosis. Nombela-Franco L, Ruel M, Radhakrishnan S, Webb JG, Hansen M, Labinaz M, Thompson C, Femes S, Dumont E, DeLarochelière R, Doyle D, Urena M, Mok M, Ribeiro HB, Roifman I, Watkins S, Dumesnil JG, Pibarot P, Rodés-Cabau J. *Am J Cardiol.* 2013 Apr 1;111(7):1026-33. doi: 10.1016/j.amjcard.2012.11.063. Epub 2013 Jan 22. PMID: 23351465
17. Ventricular arrhythmias among implantable cardioverter-defibrillator recipients for primary prevention: impact of chronic total coronary occlusion (VACTO Primary Study). Nombela-Franco L, Mitroi CD, Fernández-Lozano I, García-Touchard A, Toquero J, Castro-Urda V, Fernández-Diaz JA, Perez-Pereira E, Beltrán-Correas P, Segovia J, Werner GS, Javier G, Luis AP. *Circ Arrhythm Electrophysiol.* 2012 Feb;5(1):147-54. doi: 10.1161/CIRCEP.111.968008. Epub 2011 Dec 28. PMID: 22205684
18. Timing, predictive factors, and prognostic value of cerebrovascular events in a large cohort of patients undergoing transcatheter aortic valve implantation. Nombela-Franco L, Webb JG, de Jaegere PP, Toggweiler S, Nuis RJ, Dager AE, Amat-Santos IJ, Cheung A, Ye J, Binder RK, van der Boon RM, Van Mieghem N, Benitez LM, Pérez S, Lopez J, San Roman JA, Doyle D, Delarochelière R, Urena M, Leipsic J, Dumont E, Rodés-Cabau J. *Circulation.* 2012 Dec 18;126(25):3041-53. doi: 10.1161/CIRCULATIONAHA.112.110981. Epub 2012 Nov 13. PMID: 23149669
19. Peri-aortic hematoma complicated with aortic regurgitation following transcatheter aortic valve implantation: description of a novel mechanism of paravalvular leak. Nombela-Franco L, Goicolea J, Oteo JF. *J Invasive Cardiol.* 2012 Sep;24(9):463-4. PMID: 22954567
20. Retrograde recanalization of a chronic ostial occlusion of the left anterior descending artery: how to manage extreme takeoff angles. Nombela-Franco L, Werner GS. *J Invasive Cardiol.* 2010 Jan;22(1):E7-12. PMID: 20048406

As a Senior or corresponding Author:

1. Head to head transcatheter heart valve comparisons: when theory becomes reality. Tirado-Conte G, Armijo G, Nombela-Franco L. *Cardiovasc Diagn Ther.* 2018 Aug;8(4):552-555. doi: 10.21037/cdt.2018.07.08. PMID: 30214876 Free PMC article. No abstract available.
2. State of Transcatheter Aortic Valve Implantation in Spain Versus Europe and Non-European Countries. Biagioni C, Tirado-Conte G, Rodés-Cabau J, Ryan N, Cerrato E, Nazif TM, Eltchaninoff H, Sondergaard L, Ribeiro HB, Barbanti M, Nietlispach F, De Jaegere P, Agostoni P, Trillo R, Jiménez-Quevedo P, D'Ascenzo F, Wendler O, Maluenda

- G, Chen M, Tamburino C, Macaya C, Leon MB, Nombela-Franco L.J *Invasive Cardiol*. 2018 Aug;30(8):301-309.PMID: 30068785Clinical Trial.
3. Comparison of the Hemodynamic Performance of the Balloon-expandable SAPIEN 3 Versus Self-expandable Evolut R Transcatheter Valve: A Case-matched Study. Enríquez-Rodríguez E, Amat-Santos IJ, Jiménez-Quevedo P, Martín-Morquecho I, Tirado-Conte G, Pérez-Vizcayno MJ, Gómez de Diego JJ, Arnold R, Aldazábal A, Rojas P, de Agustín A, Del Trigo M, Gutiérrez H, San Román JA, Macaya C, Nombela-Franco L.*Rev Esp Cardiol (Engl Ed)*. 2018 Sep;71(9):735-742. doi: 10.1016/j.rec.2017.10.025. Epub 2017 Nov 28.PMID: 29191782Clinical Trial.English, Spanish.
  4. Clinical Outcomes and Prognosis Markers of Patients With Liver Disease Undergoing Transcatheter Aortic Valve Replacement: A Propensity Score-Matched Analysis. Tirado-Conte G, Rodés-Cabau J, Rodríguez-Olivares R, Barbanti M, Lhermusier T, Amat-Santos I, Toggweiler S, Cheema AN, Muñoz-García AJ, Serra V, Giordana F, Veiga G, Jiménez-Quevedo P, Campelo-Parada F, Loretz L, Todaro D, Del Trigo M, Hernández-García JM, García Del Blanco B, Bruno F, de la Torre Hernández JM, Stella P, Tamburino C, Macaya C, Nombela-Franco L.*Circ Cardiovasc Interv*. 2018 Mar;11(3):e005727. doi: 10.1161/CIRCINTERVENTIONS.117.005727.PMID: 29870383Clinical Trial.
  5. Asymmetric Ventricular Foreshortening of SAPIEN-3 Transcatheter Heart Valve Associated With Leaflet Subclinical Thrombosis. Vera-Urquiza R, Tirado-Conte G, Armijo G, Jimenez-Quevedo P, Nombela-Franco L.*JACC Cardiovasc Interv*. 2019 Jan 14;12(1):100-102. doi: 10.1016/j.jcin.2018.10.010. Epub 2018 Dec 12.PMID: 30553707No abstract available.
  6. Stent Frame Infolding of a 34-mm Evolut-R in a Patient With a Mechanical Mitral Valve. Armijo G, Castro-Mejía AF, Jimenez-Quevedo P, Vera-Urquiza R, de Agustín JA, Nombela-Franco L.*JACC Cardiovasc Interv*. 2020 Feb 10;13(3):e25-e27. doi: 10.1016/j.jcin.2019.10.009. Epub 2020 Jan 15.PMID: 31954674No abstract available.
  7. Indications for transcatheter aortic valve replacement based on the PARTNER trial. Rodés-Cabau J, Urena M, Nombela-Franco L.*Rev Esp Cardiol (Engl Ed)*. 2012 Mar;65(3):208-14. doi: 10.1016/j.recesp.2011.10.017. Epub 2012 Jan 18.PMID: 22261396English, Spanish.No abstract available.
  8. WorldwIde SurvEy on Clinical and Anatomical Factors Driving the Choice of Transcatheter Aortic Valve pRostheses. Biasco L, Cerrato E, Tersalvi G, Pedrazzini G, Wilkins B, Faletta F, Ferrari E, Demertzis S, Senatore G, Di Leo A, Varbella F, De Backer O, Nombela Franco L.*Front Cardiovasc Med*. 2020 Mar 20;7:38. doi: 10.3389/fcvm.2020.00038. eCollection 2020.PMID: 32266292Free PMC article.
  9. Efficacy and safety of left atrial appendage closure versus medical treatment in atrial fibrillation: a network meta-analysis from randomised trials. Sahay S, Nombela-Franco L, Rodes-Cabau J, Jimenez-Quevedo P, Salinas P, Biagioni C, Nuñez-Gil I, Gonzalo N, de Agustín JA, Del Trigo M, Perez de Isla L, Fernández-Ortiz A, Escaned J, Macaya C.*Heart*. 2017 Jan 15;103(2):139-147. doi: 10.1136/heartjnl-2016-309782. Epub 2016 Sep 1.PMID: 27587437
  10. How should I treat a DES restenosis in a graft anastomosis with challenging access

and multiple previous coronary interventions?

Herrera-Nogueira RS, Sahay S, Salinas P, Nuñez-Gil IJ, Nombela-Franco L, Stefanini GG, Ferrante G, Pagnotta P, Reimers B, Alfonso F, Antuña P, Rivero F. *EuroIntervention*. 2016 Apr 20;11(13):1565-8. doi: 10.4244/EIJV11I13A303.PMID: 27107319 No abstract available.

11. Incidence, Causes, and Impact of In-Hospital Infections After Transcatheter Aortic Valve Implantation.

Tirado-Conte G, Freitas-Ferraz AB, Nombela-Franco L, Jimenez-Quevedo P, Biagioni C, Cuadrado A, Nuñez-Gil I, Salinas P, Gonzalo N, Ferrera C, Vivas D, Higuera J, Viana-Tejedor A, Perez-Vizcayno MJ, Vilacosta I, Escaned J, Fernandez-Ortiz A, Macaya C. *Am J Cardiol*. 2016 Aug 1;118(3):403-9. doi: 10.1016/j.amjcard.2016.05.012. Epub 2016 May 14. PMID: 27296559

12. Clinical and hemodynamic results after direct transcatheter aortic valve replacement versus pre-implantation balloon aortic valvuloplasty: A case-matched analysis.

Ferrera C, Nombela-Franco L, Garcia E, Jimenez-Quevedo P, Biagioni C, Gonzalo N, Nuñez-Gil I, Viana-Tejedor A, Salinas P, Alberto de Agustin J, Almeria C, Islas F, Perez de Isla L, Fernandez-Perez C, Escaned J, Fernández-Ortiz A, Macaya C. *Catheter Cardiovasc Interv*. 2017 Nov 1;90(5):809-816. doi: 10.1002/ccd.26671. Epub 2016 Aug 12. PMID: 27515377

## REVIEWER

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- Reviewer in the following peer-review journals: *J Am Coll Cardiol*, *JACC Cardiovasc Interv*, *Eurointervention*, *Am J Cardiol*, *Catheter Cardiovascular interventions*, *Revista española de Cardiología*, *Minerva cardioangiologica*, *Europace*, *Circulation Interventions*.

## PROFESSIONAL ASSOCIATIONS

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1. Member of Spanish Society of Cardiology from 2005
2. Member of European Society of Cardiology (ESC) from 2005
3. Member of the Hemodynamics and Interventional Cardiology Spanish Section from 2008

## ADDITIONAL PROFESSIONAL ACTIVITIES

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1. Member of the Ethics Committee of the Hospital Clinico San Carlos.