

# Arno Nierich, MD, PhD



Senior consultant Cardiac Anesthesia & Intensive Care

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*Dr. Nierich is a senior consultant cardiac anesthesia & Intensive Care from The Netherlands. He wrote his PhD thesis about the implementation of Off-Pump cardiac surgery by the Octopus method. Afterwards he was senior consultant at the Isala Clinics Zwolle, one of the leading cardiac centers in the Netherlands, for 23 years till 2023. He developed several research lines with focus on echocardiography, prevention of neurologic damage related to cardiac interventions, coagulation management, and patient blood management. He was also head of Medical Innovation Isala. He is author of > 70 scientific papers, including Circulation and JAMA. Dr. Nierich has shifted his clinical career to the global world as innovator and inventor of MedTech devices such as the A-View catheter and the HemoClear cell saver easy. He is recently appointed as visiting Professor Anesthesiology & Intensive Care at the Academic Hospital of Paramaribo, Suriname.*

## Education

- 1973-1979 Gymnasium B, Mencia de Mendoza Lyceum, Breda.*
- 1980-1987 General Medicine, Erasmus University, Rotterdam.*
- 1990-1997 Anaesthesiology & Intensive Care, Free University of Brussels,*
- 1998-2000 PhD Thesis: Anaesthesia and Off-Pump Coronary Artery Bypass Grafting. Clinical implications and outcome.*
- 2003-2014 Director Research department Anesthesiology & Intensive Care; Isala Clinics. The Netherlands*
- 2014-2015 Master in Business Innovation Health, UMC Utrecht in collaboration with Harvard and University of California*

## Membership in Community Organizations

- *Dutch Society of Medicine (KNMG),*
- *Dutch Society of Anaesthesiology (NVA),*
- *Dutch Society of Intensive Care,*
- *European Society of Cardiac Anaesthesiology,*
- *Society of Cardiac Anesthesia USA*
- *Member of SCA workgroup Neuro Outcome*

## Selected Publication

- *A.J., Spanjersberg J.P., Ottervanger, A.P., Nierich et al. Implementation of a specific safety checklist in cardiac surgery is followed by lower postoperative mortality. European Heart Journal 2019;*
- *Hermanides, Tavenier, Nierich. A rare but devastating cause of cardiac tamponade. Netherlands Heart Journal. 2019, 27(9) 453-453*
- *A.J., Spanjersberg J.P., Ottervanger, A.P., Nierich et al. Implementation of a specific safety checklist in cardiac surgery is followed by lower postoperative mortality. European Heart Journal 2019;*
- *Wouter W. Jansen Klomp, George J. Brandon Bravo Bruinsma, Arnoud W. J. Van 't Hof, Jan G. Grandjean and Arno P. Nierich. Review Article. A Protocol for Diagnosis and Management of Aortic Atherosclerosis in Cardiac Surgery Patients . International Journal of Vascular Medicine Volume 2017, Article ID 1874395, <https://doi.org/10.1155/2017/1874395>*
- *Wouter W. Jansen Klomp, Carl G. M. Moons, Arno P. Nierich, George J. Brandon Bravo Bruinsma, Arnoud W. J. van't Hof, Jan G. Grandjean, and Linda M. Peelen. Research Article. Impact of Modified Transesophageal Echocardiography on Mortality and Stroke*

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- Bilecen S, Nierich A. [Administration of Fibrinogen Concentrate During Cardiac Surgery-Reply](#). *JAMA*. 2017 Jun 27;317(24):2551-2552. doi: 10.1001/jama.2017.6239.
- Dieleman JM, de Wit GA, Nierich AP, et al. [Long-term outcomes and cost effectiveness of high-dose dexamethasone for cardiac surgery: a randomised trial](#). *Anaesthesia*. 2017 Jun;72(6):704- 713. doi: 10.1111/anae.13853. Epub 2017 Mar 20.
- Bilecen S, de Groot JA, Kalkman CJ, Spanjersberg AJ, Brandon Bravo Bruinsma GJ, Moons KG, Nierich AP. [Effect of Fibrinogen Concentrate on Intraoperative Blood Loss Among Patients With Intraoperative Bleeding During High-Risk Cardiac Surgery: A Randomized Clinical Trial](#). *JAMA*. 2017 Feb 21;317(7):738-747. doi: 10.1001/jama.2016.21037.
- van Osch D, Dieleman JM, Bunge JJ, van Dijk D, Doevendans PA, Suyker WJ, Nathoe HM; Dexamethasone for Cardiac Surgery Study Group. [Risk factors and prognosis of postpericardiotomy syndrome in patients undergoing valve surgery](#). *J Thorac Cardiovasc Surg*. 2017 Apr;153(4):878-885.e1. doi: 10.1016/j.jtcvs.2016.10.075. Epub 2016 Nov 15.

- Patil TA, Nierich A. [Transesophageal echocardiography evaluation of the thoracic aorta](#). *AnnCard Anaesth*. 2016 Oct;19(Supplement):S44-S55. doi: 10.4103/0971-9784.192623. Review.
- Jansen Klomp WW, Peelen LM, Brandon Bravo Bruinsma GJ, Van't Hof AW, Grandjean JG, Nierich AP. [Modified transesophageal echocardiography of the dissected thoracic aorta; a novel diagnostic approach](#). *Cardiovasc Ultrasound*. 2016 Aug 3;14(1):28. doi: 10.1186/s12947-016-0071-6. Review.
- Lotte Kok, Manon Hillegers, Jan M. Dieleman,\* Diederik van Dijk,\* Arno P. Nierich,§ Peter M. Rosseel,| Joost M. van der Maaten,¶ Jan Hofland,\*\* Jan C. Diephuis,††, Fellery de Lange,‡‡ Christine Boer,§§ Jolanda Kluin,† and Sushrut S. Waikar,‡, for the Dexamethasone for Cardiac Surgery (DECS) Study Group. *The Effect of Dexamethasone on Symptoms of Posttraumatic Stress Disorder and Depression After Cardiac Surgery and Intensive Care Admission: Longitudinal Follow-Up of a Randomized Controlled Trial*. *Crit Care Med*, 2016, 512-520
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- Leonard J. Montenij, MD,\* Johannes P. Sonneveld, MD, PhD,† Arno P. Nierich, MD, PhD,† Wolfgang F. Buhre, MD, PhD,‡ and Eric E. De Waal, MD, PhD\*. *Accuracy, Precision, and Trending Ability of Uncalibrated Arterial Pressure Waveform Analysis of Cardiac Output in Patients With Impaired Left Ventricular Function: A Prospective, Observational Study*. *Journal of Cardiothoracic and Vascular Anesthesia*, Vol 30, No 1 (February), 2016: pp 115–121
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- Wouter W. Jansen Klomp, Arno P. Nierich, Linda M. Peelen, George J. Brandon Bravo Bruinsma, Jan-Henk E. Dambrink, Karel G. M. Moons and Arnoud W. J. van't Hof. *Survival and quality of life after surgical aortic valve replacement in octogenarians*. *Journal of Cardiothoracic Surgery* (2016) 11:38
- Kirolos A. Jacob,\*† David E. Leaf,‡ Jan M. Dieleman,\* Diederik van Dijk,\* Arno P. Nierich,§ Peter M. Rosseel,| Joost M. van der Maaten,¶ Jan Hofland,\*\* Jan C. Diephuis,††, Fellery de Lange,‡‡ Christine Boer,§§ Jolanda Kluin,† and Sushrut S. Waikar,‡, for the Dexamethasone for Cardiac Surgery (DECS) Study Group. *Intraoperative High-Dose Dexamethasone and Severe AKI after Cardiac Surgery*. *J Am Soc Nephrol* 26: 2947-2951, 2015
- Dirk van Osch, MD, Jan M. Dieleman, MD, Hendrik M. Nathoe, MD, PhD, Marc P. Boasson, BS, Jolanda Kluin, MD, PhD, Jeroen J. H. Bunge, MD, Arno P. Nierich, MD, PhD, Peter M. Rosseel, MD, Joost M. van der Maaten, MD, Jan Hofland, MD, PhD, Jan C. Diephuis, MD, Fellery de Lange, MD, Christa Boer, PhD, and Diederik van Dijk, MD, PhD, for the Dexamethasone for Cardiac Surgery Study Group. *Intraoperative High-Dose Dexamethasone in Cardiac Surgery and the Risk of Rethoracotomy*. *Ann Thorac Surg*

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- *Ottens TH, Dieleman JM, Sauër AM, Peelen LM, Nierich AP, de Groot WJ, Nathoe HM, Buijsrogge MP, Kalkman CJ, van Dijk D Effects of dexamethasone on cognitive decline after cardiac surgery: a randomized clinical trial.; DEXamethasone for Cardiac Surgery (DECS) StudyGroup. Anesthesiology. 2014 Sep;121(3):492-500.*
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- *Bilecen S, de Groot JA, Kalkman CJ, Spanjersberg AJ, Moons KG, Nierich AP. Effectiveness of a cardiac surgery-specific transfusion protocol. Transfusion. 2014 Mar;54(3):708-16.*
- *Svircevic V, Passier MM, Nierich AP, van Dijk D, Kalkman CJ, van der Heijden GJ. Epidural analgesia for cardiac surgery. Cochrane Database of Systematic Reviews 2013, Issue 6. Art. No.:CD006715. DOI: 10.1002/14651858.CD006715.pub2.*
- [Fibrinogen concentrate therapy in complex cardiac surgery.](#) *Bilecen S, Peelen LM, Kalkman CJ, Spanjersberg AJ, Moons KG, Nierich AP. J Cardiothorac Vasc Anesth. 2013 Feb;27(1):12-7.*

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- Arno Nierich, Wouter Jansen Klomp, Linda Peelen, George Brandon Bravo Bruinsma, Arnoud Van t Hoff. *Clinical outcome after pre-incision assessment of aortic atherosclerosis by A-View echocardiography in 5,886 elective cardiac surgery patients. J Cardiothorac Vasc Anesth*, 2011(Vol 25), S1.
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- *Diagnostic accuracy of modified transoesophageal echocardiography for pre-incision assessment of aortic atherosclerosis in cardiac surgery patients. van Zaane B, Nierich AP, Brandon Bravo Bruinsma GJ, Rosseel PM, Ramjankhan FZ, de Waal EE, Buhre WF, Moons KG. Br J Anaesth*. 2010 Aug;105(2):131-8. Epub 2010 Jun 10.
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- van Zaane, B., Nierich, A. P. (2010). *The diagnostic accuracy of the A-view method: assessing the distal ascending aorta for atherosclerosis using modified transoesophageal echocardiography. YJCAN, 23(S), S1–S35.*
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- **Van Dijk, D.; Jansen, E.W.; Hijman, R.; Nierich, A.P.; Diephuis, J.C.; Moons, K.G.; Lahpor, J.R.; Borst, C.; Keizer, A.M.; Nathoe, H.M.; Grobbee, D.E.; De Jaegere, P.P.; Kalkman, C.J. Cognitive outcome after off-pump and on-pump coronary artery bypass graft surgery: a randomized trial. *JAMA* 2002; 287; 11: 1405-1412.**
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- **Nierich AP, Jansen EW, et al. Early outcome after off-pump versus on-pump coronary bypass surgery: results from a randomized study. *Circulation* 2001 Oct 9;104(15):1761-6.**
- **J. Damen, A. Nierich. Prevention of cardiac complications following non-cardiac surgery. *Current Anaesthesia & Critical Care* 2001, Volume 12, Number 6, p 315-328**
- **Arno P. Nierich M.D., Jan Diephuis M.D., Diederik van Dijk M.D., Erik W.L. Jansen M.D., PhD., Jaap R. Lahpor M.D., PhD., Cornelius Borst M.D., PhD, Johan T.A. Knappe M.D., PhD. *Embracing the Heart, Perioperative management in 100 patients' Off-pump coronary artery bypass grafting using the Octopus Tissue Stabilizer. J Cardiothorac Vasc Anaesth.* 13: 123-129, 1999.**
- **Arno P. Nierich, Jan Diephuis, Erik W.L. Jansen, Cornelius Borst M.D., PhD., Johannes T.A. Knappe M.D., PhD. Hemodynamic alterations during off-pump CABG using the Utrecht Octopus method: Clinical results in 150 patients. *Annals of thoracic surgery* May 1999.**
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