

A 3D scientific illustration showing red blood cells (red) and heparin chains (blue) on a surface. The heparin chains are depicted as blue, irregular, porous structures with red segments, extending from a light-colored surface into a light blue fluid. Red blood cells are shown as smooth, red, biconcave discs floating in the fluid above the surface.

CARMEDA[®] BioActive Surface / CBAS[®] Heparin Surface Reference List

Updated April, 2024

Preface

The CARMEDA® BioActive Surface (also known as CBAS® Heparin Surface) was invented in the early eighties, used clinically for the first time in 1986, and because of its outstanding thromboresistant properties numerous of medical devices coated with this surface technology have since then been marketed worldwide. Today the CARMEDA® BioActive Surface is the most clinically proven and published surface technology for medical devices used in contact with blood.

This reference list is a living document aimed at gathering references around the CARMEDA® BioActive Surface and on the clinical performance of the products featuring this surface technology. It provides a true and unbiased picture of the technology. Overall, this reference list provides evidence of the CARMEDA® BioActive Surface's safe, efficient, and superior thromboresistant and biocompatible benefits for both short-term and permanent blood-contacting medical devices.

Note that the list contains references describing the off-label use of some products. It is not intended to be used to promote the off-label use of a product. Consult the Instructions for Use for the product in your country.

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Basic Science

- 1) Hoffman J, Larm O, Scholander E. A new method for covalent coupling of heparin and other glycosaminoglycans to substances containing primary amino groups. *Carbohydr Res* **1983**, 117: 328-331.
- 2) Pejler G, Lindahl U, Larm O, Scholander E, Sandgren E, Lundblad A. Monoclonal antibodies specific for oligosaccharides prepared by partial nitrous acid deamination of heparin. *J Biol Chem* **1988**, 263(11): 5197-5201.
- 3) Bertilsson L, Elwing H, Liedberg B, Larm O, Riesenfeld J, Scholander E. Infrared characterization of complex sandwich structures: heparin immobilization on polyethylene surfaces. *Molecular Engineering* **1991**, 1: 49-57.

Experimental *In Vitro*

Biocompatibility

- 4) Larm O, Larsson R, Olsson P. A new non-thrombogenic surface prepared by selective covalent binding of heparin via a modified reducing terminal residue. *Biomater Med Devices Artif Organs*, **1983**, 11: 161-173.
- 5) Pasche B, Kodama K, Larm O, Olsson P, Swedenborg J. Thrombin inactivation on surfaces with covalently bonded heparin. *Thromb Res* **1986**, 44(6): 739-748.
- 6) Arnander C, Dryjski M, Larsson R, Olsson P, Swedenborg J. Thrombin uptake and inhibition on endothelium and surfaces with a stable heparin coating: a comparative in vitro study. *J Biomed Mater Res* **1986**, 20(2): 235-246.
- 7) Larm O, Lins LE, Olsson P. An approach to antithrombosis by surface modification. *Progress in Artificial Organs* **1986**: 313-318.
- 8) Arnander C, Pasche B, Kodama K, Rasmuson A, Olsson P. Influence of high and low wall shear rates on the inhibition of factor Xa and thrombin at surfaces coated with immobilized heparin. *Artif Organs* **1989**, 13(6): 521-526.
- 9) Pasche B, Elgue G, Olsson P, Riesenfeld J, Rasmuson A. Binding of antithrombin to immobilized heparin under varying flow conditions. *Artif Organs* **1991**, 15(6): 481-491.
- 10) Kodama K, Pasche B, Olsson P, Swedenborg J, Adolfsson L, Larm O, Riesenfeld J. Antithrombin III binding to surface immobilized heparin and its relation to FXa inhibition. *Thromb Haemost* **1987**, 58(4): 1064-1067.
- 11) Videm V, Mollnes TE, Garred P, Svennevig JL. Biocompatibility of extracorporeal circulation. In vitro comparison of heparin-coated and uncoated oxygenator circuits. *J Thorac Cardiovasc Surg* **1991**, 101(4): 654-660.
- 12) Videm V, Nilsson L, Venge P, Svennevig JL. Reduced granulocyte activation with a heparin-coated device in an in vitro model of cardiopulmonary bypass. *Artif Organs* **1991**, 15(2): 90-95.

- 13) Stenach N, Korn RL, Fisher CA, Jeevanandam V, Addonizio VP. The effects of heparin bound surface modification (Carmeda Bioactive Surface) on human platelet alterations during simulated extracorporeal circulation.
J Extra Corpor Technol **1992**, 24(3): 97-102.
- 14) Nilsson UR, Larm O, Nilsson B, Storm KE, Elwing H, Nilsson Ek Dahl K. Modification of the complement binding properties of polystyrene: effects of end-point heparin attachment.
Scand J Immunol **1993**, 37(3): 349-354.
- 15) Elgue G, Sanchez J, Egberg N, Olsson P, Riesenfeld J. Effect of surface-immobilized heparin on the activation of adsorbed factor XII.
Artif Organs **1993**, 17(8): 721-726.
- 16) Elgue G, Blomback M, Olsson P, Riesenfeld J. On the mechanism of coagulation inhibition on surfaces with end point immobilized heparin.
Thromb Haemost **1993**, 70(2): 289-293.
- 17) Wendel HP, Heller W, Gallimore MJ, Hoffmeister HE. Heparin-coated oxygenators significantly reduce contact system activation in an in vitro cardiopulmonary bypass model.
Blood Coagul Fibrinolysis **1994**, 5(5): 673-678.
- 18) Mollnes TE, Riesenfeld J, Garred P, Nordstrom E, Hogasen K, Fosse E, Gotze O, Harboe M. A new model for evaluation of biocompatibility: combined determination of neoepitopes in blood and on artificial surfaces demonstrates reduced complement activation by immobilization of heparin.
Artif Organs **1995**, 19(9): 909-917.
- 19) Sanchez J, Elgue G, Riesenfeld J, Olsson P. Control of contact activation on end-point immobilized heparin: the role of antithrombin and the specific antithrombin-binding sequence.
J Biomed Mater Res **1995**, 29(5): 655-661.
- 20) Orvim U, Barstad RM, Vlasuk GP, Sakariassen KS. Effect of selective factor Xa inhibition on arterial thrombus formation triggered by tissue factor/factor VIIa or collagen in an ex vivo model of shear-dependent human thrombogenesis.
Arterioscler Thromb Vasc Biol **1995**, 15(12): 2188-2194.
- 21) Korn RL, Fisher CA, Livingston ER, Stenach N, Fishman SJ, Jeevanadam V, Addonizio VP. The effects of Carmeda Bioactive Surface on human blood components during simulated extracorporeal circulation.
J Thorac Cardiovasc Surg **1996**, 111(5): 1073-1084.
- 22) Moen O, Fosse E, Braten J, Andersson C, Hogasen K, Mollnes TE, Venge P, Kierulf P. Differences in blood activation related to roller/centrifugal pumps and heparin-coated/uncoated surfaces in a cardiopulmonary bypass model circuit.
Perfusion **1996**, 11(2): 113-123.
- 23) Yii M, Gourlay T, Fleming J, Matata B, Taylor KM. Evaluation of Carmeda bioactive surface (CBAS), Duraflo II and a novel nonspecific protease-modified surface using a new in vitro model simulating cardiopulmonary bypass.
Perfusion JT - Perfusion **1996**, 11(3): 229-240.

- 24) Wendel HP, Heller W, Gallimore MJ. Heparin-coated devices and high-dose aprotinin optimally inhibit contact system activation in an in vitro cardiopulmonary bypass model. *Immunopharmacology* **1996**, 32(1-3): 128-130.
- 25) Baba T, Morisita K, Sakata J, Ito T, Hachiro Y, Kazui T, Abe A, Komatu S. Experimental studies on three types of heparin-coated cardiopulmonary bypass circuits. *Artif Organs* **1997**, 21(7): 779-781.
- 26) Hogevoid HE, Moen O, Fosse E, Venge P, Braten J, Andersson C, Lyberg T. Effects of heparin coating on the expression of CD11b, CD11c and CD62L by leucocytes in extracorporeal circulation in vitro. *Perfusion* **1997**, 12(1): 9-20.
- 27) Borowiec JW, Venge P, Henze A, Nilsson B, Stiernstrom H. Biomaterial-dependent blood activation during simulated extracorporeal circulation: a study of heparin-coated and uncoated circuits. *Thorac Cardiovasc Surg* **1997**, 45(6): 295-301.
- 28) Borowiec J, Jaramillo A, Venge P, Nilsson L, Thelin S. Effects of heparin-coating of cardiopulmonary bypass circuits on leukocytes during simulated extracorporeal circulation. *Cardiovasc Surg* **1997**, 5(6): 568-573.
- 29) Garred P, Mollnes TE. Immobilized heparin inhibits the increase in leukocyte surface expression of adhesion molecules. *Artif Organs* **1997**, 21(4): 293-299.
- 30) Sanchez J, Elgue G, Riesenfeld J, Olsson P. Inhibition of the plasma contact activation system of immobilized heparin: relation to surface density of functional antithrombin binding sites. *J Biomed Mater Res* **1997**, 37(1): 37-42.
- 31) Hachiro Y, Morishita K, Ito T, Sakata J, Baba T, Tsukamoto M, Abe T. The method for keeping low perfusion flow weaning from centrifugal pumps: an evaluation of hemolysis in the circulator units. *Artif Organs* **1997**, 21(7): 710-713.
- 32) Bannan S, Danby A, Cowan D, Ashraf S, Gesinde M, Martin P. Cell activation and thrombin generation in heparin bonded cardiopulmonary bypass circuits using a novel in vitro model. *Eur J Cardiothorac Surg* **1997**, 12(2): 268-275.
- 33) Bannan S, Martin PG. Aprotinin complements heparin bonding in an in vitro model of cardiopulmonary bypass. *Br J Haematol* **1998**, 101(3): 455-461.
- 34) Hayashi Y, Sawa Y, Nishimura M, Chang JC, Amemiya A, Kagisaki K, Taketani S, Yamaguchi T, Hirata N, Ohtake S, Matsuda H. Nitric oxide gas infusion to the oxygenator enhances the biocompatibility of heparin coated extracorporeal bypass circuits. *ASAIO J* **1998**, 44(5): M456-61.
- 35) Sanchez J, Elgue G, Riesenfeld J, Olsson P. Studies of adsorption, activation, and inhibition of factor XII on immobilized heparin. *Thromb Res* **1998**, 89(1): 41-50.

- 36) Lundberg F, Falkenback D, Bekassy AN, Jennerberg M, Riesenfeld J, Ljungh A. Doxorubicin reversibly decreases the antithrombogenicity of heparin immobilized on central venous catheters.
Pediatr Hematol Oncol **1998**, 15(1): 23-35.
- 37) Barstad RM, Hamers MJ, Moller AS, Sakariassen KS. Monocyte procoagulant activity induced by adherence to an artificial surface is reduced by end-point immobilized heparin-coating of the surface.
Thromb Haemost **1998**, 79(2): 302-305.
- 38) Niimi Y, Ichinose F, Ishiguro Y, Terui K, Uezono S, Morita S, Yamane S. The effects of heparin coating of oxygenator fibers on platelet adhesion and protein adsorption.
Anesth Analg **1999**, 89(3): 573-579.
- 39) Wendel HP, Scheule A M, Eckstein FS, Ziemer G. Haemocompatibility of paediatric membrane oxygenators with heparin-coated surfaces.
Perfusion **1999**, 14(1): 21-28.
- 40) Mollnes TE, Videm V, Christiansen D, Bergseth G, Riesenfeld J, Hovig T. Platelet compatibility of an artificial surface modified with functionally active heparin.
Thromb Haemost **1999**, 82(3): 1132-1136.
- 41) Wendel HP, Schulze HJ, Heller W, Hoffmeister HM. Platelet protection in coronary artery surgery: benefits of heparin-coated circuits and high-dose aprotinin therapy.
J Cardiothorac Vasc Anesth **1999**, 13(4): 388-392.
- 42) Hammaren E, Rosenberg PH, Hynynen M. Coating of extracorporeal circuit with heparin does not prevent sequestration of propofol in vitro.
Br J Anaesth **1999**, 82(1): 38-40.
- 43) Baksaas ST, Videm V, Pedersen T, Karlsen H, Mollnes TE, Brosstad F, Svennevig JL. Comparison of three oxygenator-coated and one total-circuit-coated extracorporeal devices.
Perfusion **1999**, 14(2): 119-127.
- 44) Wendel HP, Weber N, Ziemer G. Increased adsorption of high molecular weight kininogen to heparin-coated artificial surfaces and correlation to hemocompatibility.
Immunopharmacology **1999**, 43(2-3): 149-153.
- 45) Weber N, Wendel HP, Ziemer G. Quality assessment of heparin coatings by their binding capacities of coagulation and complement enzymes.
J Biomater Appl **2000**, 15(1): 8-22.
- 46) Munch K, Wolf MF, Gruffaz P, Ottenwaelter C, Bergan M, Schroeder P, Fogt EJ. Use of simple and complex in vitro models for multiparameter characterization of human blood-material/device interactions.
J Biomater Sci Polym Ed **2000**, 11(11): 1147-1163.
- 47) Wendel HP, Weber N, Ziemer G. Comparative studies of the adsorption behavior of plasma proteins to heparin-coated surfaces.
Biomed Tech (Berl) **2000**, 45(10): 282-287.

- 48) Scholz T, Solberg R, Okkenhaug C, Videm V, Gallimore MJ, Mathisen O, Pedersen T, Mollnes TE, Bergan A, Soreide O, Klintmalm GB, Aasen AO. Veno-venous bypass in liver transplantation: heparin-coated perfusion circuits reduce the activation of humoral defense systems in an in vitro model.
Perfusion **2001**, 16(4): 285-292.
- 49) Niimi Y, Ishiguro Y, Nakata Y, Goto T, Morita S, Yamane S. Platelet adhesion to heparin coated oxygenator fibers under in vitro static conditions: impact of temperature.
ASAIO J **2001**, 47(4): 361-364.
- 50) Scholz T, Solberg R, Okkenhaug C, Videm V, Gallimore MJ, Mathisen O, Pedersen T, Mollnes TE, Bergan A, Soreide O, Klintmalm GB, Aasen AO. Veno-venous bypass in liver transplantation: heparin-coated perfusion circuits reduce the activation of humoral defense systems in an in vitro model.
Perfusion **2001**, 16(4): 285-292.
- 51) Weber N, Wendel HP, Ziemer G. Hemocompatibility of heparin-coated surfaces and the role of selective plasma protein adsorption.
Biomaterials **2002**, 23(2): 429-439.
- 52) Kopp R, Mottaghy K, Kirschfink M. Mechanism of complement activation during extracorporeal blood-biomaterial interaction: effects of heparin coated and uncoated surfaces.
ASAIO J **2002**, 48(6): 598-605.
- 53) Hayashi Y, Sawa Y, Hirata N, Nishimura M, Ueda H, Naka Y, Yamaguchi T, Ohtake S, Matsuda H. Improvement of bypass circuit biocompatibility: comparison and combination of heparin-coated circuit and nitric oxide gas infusion.
J Card Surg **2002**, 17(6): 477-484
- 54) Cornelius RM, Sanchez J, Olsson P, Brash JL. Interactions of antithrombin and proteins in the plasma contact activation system with immobilized functional heparin.
J Biomed Mater Res **2003**, 67A (2): 475-483.
- 55) Weber N, Caliebe J, Ziemer G, Wendel HP. Material-dependent levels of heat-shock protein 70 (hsp70) in human plasma following contact of blood with artificial surfaces.
J Biomater Sci Polym Ed **2003**, 14(8): 747-760.
- 56) Videm V. Endpoint-attached heparin blocks neutrophil sticking and spreading.
Biomaterials **2004**, 25(1): 43-51.
- 57) Lappegård KT, Fung M, Bergseth G, Riesenfeld J, Lambris J D, Videm V, Mollnes TE. Effect of complement inhibition and heparin coating on artificial surface-induced leukocyte and platelet activation.
Ann Thorac Surg **2004**, 77(3): 932-941.
- 58) Lappegård KT, Fung M, Bergseth G, Riesenfeld J, Mollnes TE. Artificial surface-induced cytokine synthesis: effect of heparin coating and complement inhibition.
Ann Thorac Surg **2004**, 78(1): 38-44.
- 59) Lappegård KT, Riesenfeld J, Brekke O L, Bergseth G, Lambris JD, Mollnes TE. Differential effect of heparin coating and complement inhibition on artificial surface-induced eicosanoid production.
The Annals of thoracic surgery **2005**, 79(3): 917-923.

- 60) Heyligers JM, Verhagen HJ, Rotmans JI, Weeterings C, de Groot PG, Moll FL, Lisman T. Heparin immobilization reduces thrombogenicity of small-caliber expanded polytetrafluoroethylene grafts.
J Vasc Surg JT - Journal of vascular surgery: official publication, the Society for Vascular Surgery and International Society for Cardiovascular **2006**, 43(3): 587-591.
- 61) Lappegård KT, Bergseth G, Riesenfeld J, Pharo A, Magotti P, Lambris JD, Mollnes TE. The artificial surface-induced whole blood inflammatory reaction revealed by increases in a series of chemokines and growth factors is largely complement dependent.
J Biomed Mater Res A **2008**, 87(1): 129-135.
- 62) Bergseth G, Lambris JD, Mollnes TE, Lappegård KT. Artificial surface-induced inflammation relies on complement factor 5: proof from a deficient person.
Ann Thorac Surg **2011**, 91(2): 527-533.
- 63) Gore S, Andersson J, Biran R, Underwood C, Riesenfeld J. Heparin Surfaces: Impact of Immobilization Chemistry on Hemocompatibility and Protein Adsorption.
J Biomed Mater Res - Part B Appl Biomater **2014**, 102(8): 1817-1824.
- 64) Chan CHH, Diab S, Moody K, Frazier OH, Sampaio LC, Fraser CD Jr, Teruya J, Adachi I. In Vitro Hemocompatibility Evaluation of Ventricular Assist Devices in Pediatric Flow Conditions: A Benchmark Study.
Artif Organs **2018**, 42(11): 1028-1034.

Experimental *In Vitro*

Other

- 65) Mottaghy K, Oedekoven B, Starmans H, Muller B, Kashefi A, Hoffmann B, Bohm S. Technical aspects of plasma leakage prevention in microporous capillary membrane oxygenators.
ASAIO Trans **1989**, 35(3): 640-643.
- 66) Vocelka CR, Thomas R, Verrier E, Kunzelman K. An in vitro comparison of gas transfer and pressure drop of the Bentley Duraflo Coated Spiral Gold and the Medtronic Carmeda Coated Maxima hollow fiber membrane oxygenators.
J Extra Corpor Technol **1997**, 29(4): 185-188.
- 67) Zdanowski Z, Koul B, Hallberg E, Schalen C. Influence of heparin coating on in vitro bacterial adherence to poly(vinyl chloride) segments.
J Biomater Sci Polym Ed **1997**, 8(11): 825-832.
- 68) Walczak R, Lawson DS, Kaemmer D, McRobb C, McDermott P, Smigla G, Shearer I, Lodge A, Jagers J. Evaluation of a preprimed microporous hollow-fiber membrane for rapid response neonatal extracorporeal membrane oxygenation.
Perfusion **2005**, 20(5): 269-275.
- 69) Hildenbrand SL, Lehmann HD, Wodarz R, Ziemer G, Wendel HP. PVC-plasticizer DEHP in medical products: do thin coatings really reduce DEHP leaching into blood?
Perfusion **2005**, 20(6): 351-357.
- 70) Alexander PJ, Lawson DS, Cornell J, Craig DM, Cheifetz IM. Insensible water loss from the medtronic minimax oxygenator: an in vitro study.
ASAIO J **2006**, 52(2): 206-210.

- 71) Dwyer A, Sukavaneshvar S, Nimkar S, Aronoff G. In Surface heparinization of hemodialysis catheters reduces thrombus and fibrin sheath formation. *ASDIN Annual scientific meeting*, **2006**.
- 72) Sakariassen KS. Thrombus formation on apex of arterial stenosis: the need for a fluid high shear stenosis diagnostic device. *Future cardiology* **2007**, 3(2): 193-201.
- 73) Urban K, Redford D, Larson DF. Insulin binding to the cardiopulmonary bypass biomaterials. *Perfusion* **2007**, 22(3): 207-210.
- 74) Sakariassen KS. Validation of the human tissue factor/FVIIa complex as an antithrombotic target and the discovery of a synthetic peptide. *Future cardiology* **2007**, 3(3): 249-262.
- 75) Burkhart HM, Joyner N, Niles S, Ploessl J, Everett J, Iannettoni M, Richenbacher W. Presence of plasticizer di-2(ethylhexyl)phthalate in primed extracorporeal circulation circuits. *ASAIO J* **2007**, 53(3): 365-367.
- 76) Zhao X, Courtney JM, Yin HQ, West RH, Lowe GD. Blood interactions with plasticised poly (vinyl chloride): influence of surface modification. *J Mater Sci Mater Med* **2008**, 19(2): 713-719.

Experimental *In Vivo*

Extracorporeal Circulation - Cardiovascular Surgery

- 77) Bagge L, Thelin S, Hultman J, Nilsson L, Thorelius J, Hillstrom PA. Heparin-coated CPB-sets increase biocompatibility and reduce endothelial cell damage in pigs. *J Cardiothorac Anesth* **1989**, 3(5 Suppl 1): 84.
- 78) Nilsson L, Storm KE, Thelin S, Bagge L, Hultman J, Thorelius J, Nilsson U. Heparin-coated equipment reduces complement activation during cardiopulmonary bypass in the pig. *Artif Organs* **1990**, 14(1): 46-48.
- 79) von Segesser LK, Lachat M, Leskosek B, Turina M, Gallino A, von Felten A, Pei P. Cardiopulmonary bypass with low systemic heparinization: an experimental study. *Perfusion* **1990**, 5(4): 267-276.
- 80) von Segesser LK, Weiss BM, Gallino A, Leskosek B, Redha F, von Felten A, Turina M. Superior hemodynamics in left heart bypass without systemic heparinization. *Eur J Cardiothorac Surg* **1990**, 4(7): 384-388, discussion 389.
- 81) von Segesser LK, Lachat M, Gallino A, Weiss BM, Leskosek B, Garcia E, Hanseler E, von Felten A, Turina M. Performance characteristics of centrifugal pumps with heparin surface coating. *Thorac Cardiovasc Surg* **1990**, 38(4): 224-228.
- 82) Thelin S, Bagge L, Hultman J, Borowiec J, Nilsson L, Thorelius J. Heparin-coated cardiopulmonary bypass circuits reduce blood cell trauma. Experiments in the pig. *Eur J Cardiothorac Surg* **1991**, 5(9): 486-491.

- 83) Campanella C, Cameron E, Sinclair C, Feilberg VL, Hider C, Prasad S, Boulton F, Lamb D. Preliminary results of left heart bypass in pigs using a heparin-coated centrifugal pump. *Ann Thorac Surg* **1991**, 52(2): 245-249.
- 84) von Segesser LK, Weiss BM, Pasic M, Leskosek B, von Felten A, Pei P, Turina M. Experimental evaluation of heparin-coated cardiopulmonary bypass equipment with low systemic heparinization and high-dose aprotinin. *Thorac Cardiovasc Surg* **1991**, 39(5): 251-256.
- 85) Plotz FB, van Oeveren W, Hultquist KA, Miller C, Bartlett RH, Wildevuur CR. A heparin-coated circuit reduces complement activation and the release of leukocyte inflammatory mediators during extracorporeal circulation in a rabbit. *Artif Organs* **1992**, 16(4): 366-370.
- 86) Redmond JM, Gillinov AM, Stuart RS, Zehr KJ, Winkelstein JA, Herskowitz A, Cameron DE, Baumgartner WA. Heparin-coated bypass circuits reduce pulmonary injury. *Ann Thorac Surg* **1993**, 56(3): 474-478, discussion 479.
- 87) Bhujle R, Li J, Shastri P, Gaffke JN, Clift JE, Ye YW, Dollar ML, Ching P, Chao R, Constantinescu A, Kulkarni PV, Cheng QC, Wians F, Jessen ME, Eberhart RC. Influence of cardiopulmonary bypass on platelet and neutrophil accumulations in internal organs. *ASAIO J* **1997**, 43(5): M739-44.
- 88) Bagge L, Borowiec JW, Thelin S, Hultman J. Haemostasis at low heparin dosage during cardiopulmonary bypass with heparin-coated circuits in pigs. *Scand Cardiovasc J* **1997**, 31(5): 275-281.
- 89) Weerwind PW, van der VeF, Lindhout T, de Jong DS, Cahalan PT. Ex vivo testing of heparin-coated extracorporeal circuits: bovine experiments. *Int J Artif Organs* **1998**, 21(5): 291-298.
- 90) Hussaini BE, Treanor PR, Healey NA, Tilahun D, Srey R, Lu XG, Khuri SF, Thatte HS. Evaluation of blood components exposed to coated arterial filters in extracorporeal circuits. *Perfusion* **2009**, 24(5): 317-323.
- 91) Hussaini BE, Treanor PR, Healey NA. Multifactorial Comparison of Modified and Conventional Perfusion Strategies in A Porcine Model of Cardiopulmonary Bypass. *J Surg Res* **2011**, 1, 168(1): e7-15.
- 92) Teligui L, Dalmayrac E, Mabileau G, Macchi L. An ex vivo evaluation of blood coagulation and thromboresistance of two extracorporeal circuit coatings with reduced and full heparin dose. *Interact Cardiovasc Thorac Surg* **2014**, 18(6).

Experimental *In Vivo*

Extracorporeal Circulation - Long Term Assist

- 93) Bindslev L, Gouda I, Inacio J, Kodama K, Lagergren H, Larm O, Nilsson E, Olsson P. Extracorporeal elimination of carbon dioxide using a surface-heparinized veno-venous bypass system. *ASAIO Trans* **1986**, 32(1): 530-533.

- 94) Klein MD, Arensman RM, Weber TR, Mottaghy K, Langer R, Nolte SH. Pediatric ECMO. Directions for new developments. *ASAIO Trans* **1988**, 34(4): 978-985.
- 95) Durham SJ, Borovetz HS, Leonard R, Griffith BP. Right ventricular perfusion and heparin bonding of a cross-flow membrane oxygenator. *ASAIO Trans* **1988**, 34(3): 817-819.
- 96) Mottaghy K, Oedekoven B, Schaich-Lester D, Poppel K, Kupper W. Application of surfaces with end point attached heparin to extracorporeal circulation with membrane lungs. *ASAIO Trans* **1989**, 35(2): 146-152.
- 97) Mottaghy K, Oedekoven B, Poppel K, Bruchmuller K, Kovacs B, Spahn A, Geisen C. Heparin free long-term extracorporeal circulation using bioactive surfaces. *ASAIO Trans* **1989**, 35(3): 635-637.
- 98) Marcolin R, Cugno M, Pesenti A, Uziel L, Giuffrida A, Vitale G, Keim R, Meda F, Fabrizi I, Gattinoni L. Extracorporeal circulation in sheep with normal bleeding time using a surface heparinized circuit. *ASAIO Trans* **1991**, 37(4): 584-587.
- 99) Koul B, Willen H, Sjoberg T, Wetterberg T, Kugelberg J, Steen S. Pulmonary sequelae of prolonged total venoarterial bypass: evaluation with a new experimental model. *Ann Thorac Surg* **1991**, 51(5): 794-799.
- 100) Koul B, Wetterberg T, Sjoberg T, Kimblad PO, Kugelberg J, Steen S. Veno-right ventricular bypass as total extracorporeal lung assistance. An experimental study. *J Thorac Cardiovasc Surg* **1991**, 101(4): 719-723.
- 101) Plotz FB, van Oeveren W, Aloe LS, Riley MK, Hultquist KA, Bartlett RH, Wildevuur CR. Prophylactic administration of tranexamic acid preserves platelet numbers during extracorporeal circulation in rabbits. *ASAIO Trans* **1991**, 37(3): M416-417.
- 102) Mottaghy K, Oedekoven B, Poppel K, Kovacs B, Kirschfink M, Bruchmuller K, Kashefi A, Geisen C. Heparin-coated versus non-coated surfaces for extracorporeal circulation. *Int J Artif Organs* **1991**, 14(11): 721-728.
- 103) Frenckner B, Ehren H, Palmer K, Gouda I, Larm O, Olsson P. Surface-heparinized neonatal ECMO circuit - an experimental animal study. *Perfusion* **1992**, 7(1): 47-51.
- 104) Shanley CJ, Hultquist KA, Rosenberg DM, McKenzie JM, Shah NL, Bartlett RH. Prolonged extracorporeal circulation without heparin. Evaluation of the Medtronic Minimax oxygenator. *ASAIO J* **1992**, 38(3): M311-6.
- 105) Koul B, Vesterqvist O, Egberg N, Steen S. Twenty-four-hour heparin-free veno-right ventricular ECMO: an experimental study. *Ann Thorac Surg* **1992**, 53(6): 1046-1051.
- 106) Kirschfink M, Kovacs B, Mottaghy K. Extracorporeal circulation: in vivo and in vitro analysis of complement activation by heparin-bonded surfaces. *Circ Shock* **1993**, 40(3): 221-226.

- 107) Palmer K, Ehren H, Benz R, Frenckner B. Carmeda surface heparinization in neonatal ECMO systems: long-term experiments in a sheep model.
Perfusion **1995**, 10(5): 307-313.
- 108) Crotti S, Tubiolo D, Pelosi P, Chiumello D, Mascheroni D, Gattinoni L. Long-term evaluation of gas exchange and hydrodynamic performance of a heparinized artificial lung: comparison of two different hollow fiber pore sizes.
Int J Artif Organs **1997**, 20(1): 22-28.
- 109) Urlesberger B, Zobel G, Rodl S, Dacar D, Friehs I, Leschnik B, Muntean W. Activation of the clotting system: heparin-coated versus non coated systems for extracorporeal circulation.
Int J Artif Organs **1997**, 20(12): 708-712.
- 110) Ao H, Tajiri A, Yanagi F, Okamoto T, Tashiro M, Sakanashi Y, Tanimoto H, Moon JK, Terasaki H. Heparin bonding of the extracorporeal circuit reduces thrombosis during prolonged lung assist in goats.
ASAIO J **2000**, 46(6): 723-729.
- 111) Kopp R, Bensberg R, Henzler D, Niewels A, Randerath S, Rossaint R, Kuhlen R. Hemocompatibility of a miniaturized extracorporeal membrane oxygenation and a pumpless interventional lung assist in experimental lung injury.
Artif Organs **2010**, 34(1): 13-21.

Experimental *In Vivo*

Extracorporeal Circulation - Other

- 112) Lins LE, Olsson P, Hjelte MB, Larsson R, Larm O. Haemodialysis in dogs with a heparin coated hollow fibre dialyser.
Proc Eur Dial Transplant Assoc Eur Ren Assoc **1985**, 21: 270-275.
- 113) Sistino JJ, Michler RE, Mongero LB, Schwartz A, Marboe C, Geiman R, Kwiatkowski P. Safety of heparin-coated circuits in primates during deep hypothermic cardiopulmonary bypass.
J Extra Corpor Technol **1993**, 25(1): 15-21.

Experimental *In Vivo*

Ventricular Assist

- 114) von Segesser LK, Weiss BM, Bisang B, Leskosek B, Turina MI. Ventricular assist with heparin surface coated devices.
ASAIO Trans **1991**, 37(3): M278-279.
- 115) von Segesser LK, Weiss BM, Hanseler E, Bisang B, Leskosek B, von Felten A, Turina M. Improved biocompatibility of heparin surface-coated ventricular assist devices.
Int J Artif Organs **1992**, 15(5): 301-306.
- 116) Wagner-Mann C, Curtis J, Mann FA, Turk J, Demmy T, Turpin T. Subchronic centrifugal mechanical assist in an unheparinized calf model.
Artif Organs **1996**, 20(6): 666-669.

Experimental *In Vivo*

Peripheral Vascular Surgery

- 117) Begovac PC, Thomson RC, Fisher JL, Hughson A, Gällhagen A. Improvements in GORE-TEX® Vascular Graft Performance by Carmeda® BioActive Surface Heparin Immobilization.
Eur J Vasc Endovasc Surg **2003**, 25(5): 432-437.
- 118) Lin PH, Bush RL, Yao Q, Lumsden AB, Chen C. Evaluation of platelet deposition and neointimal hyperplasia of heparin-coated small-caliber ePTFE grafts in a canine femoral artery bypass model.
J Surg Res **2004**, 118(1): 45-52.
- 119) Lin PH, Chen C, Bush RL, Yao Q, Lumsden AB, Hanson SR. Small-caliber heparin-coated ePTFE grafts reduce platelet deposition and neointimal hyperplasia in a baboon model.
J Vasc Surg **2004**, 39(6): 1322-1328.
- 120) Pedersen G, Laxdal E, Ellensen V, Jonung T, Mattsson E. Improved patency and reduced intimal hyperplasia in PTFE grafts with luminal immobilized heparin compared with standard PTFE grafts at six months in a sheep model.
J Cardiovasc Surg (Torino) **2010**, 51(3): 443-448.
- 121) Freeman J, Chen A, Weinberg RJ, Okada T, Chen C, Lin PH. Sustained Thromboresistant Bioactivity with Reduced Intimal Hyperplasia of Heparin-Bonded Polytetrafluoroethylene Propaten Graft in a Chronic Canine Femoral Artery Bypass Model.
Ann Vasc Surg **2018**, 49: 295-303.

Experimental *In Vivo*

Peripheral Stenting

- 122) Levy EI, Boulos AS, Hanel RA, Tio FO, Alberico RA, Fronckowiak MD, Nemes B, Paciorek AM, Guterman LR, Hopkins LN. In vivo model of intracranial stent implantation: a pilot study to examine the histological response of cerebral vessels after randomized implantation of heparin-coated and uncoated endoluminal stents in a blinded fashion.
J Neurosurg **2003**, 98(3): 544-553.

Experimental *In Vivo*

Coronary Stenting

- 123) Hardhammar P, Albertsson P, Emanuelsson H. [May heparinization of stents eliminate the risk of thrombosis? Development of coronary angioplasty may be changed.
Lakartidningen **1995**, 92(14): 1477-1478.
- 124) Hardhammar PA, van Beusekom HM, Emanuelsson HU, Hofma SH, Albertsson PA, Verdouw PD, Boersma E, Serruys PW, van der Giessen WJ. Reduction in thrombotic events with heparin-coated Palmaz-Schatz stents in normal porcine coronary arteries.
Circulation **1996**, 93(3): 423-430.
- 125) Lin PH, Chronos NA, Marijianowski MM, Chen C, Bush RL, Conklin B, Lumsden AB, Hanson SR. Heparin-coated balloon-expandable stent reduces intimal hyperplasia in the iliac artery in baboons.
J Vasc Interv Radiol **2003**, 14(5): 603-611.

- 126) Zhao J, Falotico R, Nguyen T, Cheng Y, Parker T, Dave V, Rogers C, Riesenfeld J. A nonelutable low-molecular weight heparin stent coating for improved thromboresistance.
J Biomed Mater Res B Appl Biomater **2012**; 100: 1274-82.

Experimental *In Vivo*

Neurovascular

- 127) King. Active Drug-Coated Flow Diverter in a Preclinical Model of Intracranial Stenting.
J NeuroInterventional Surg **2023**, Jun 30. Epub ahead of print.

Experimental *In Vivo*

Other

- 128) Arnander C, Hjelte M-B, Lins L-E, Larm O, Larsson R, Olsson P. Blood compatibility of a hollow-fiber dialyzer with a new coating of covalently bound heparin.
Proceedings / European Society for Artificial Organs, ESAO **1982**, 9: 312-315.
- 129) Arnander C, Bagger-Sjoberg D, Frebelius S, Larsson R, Swedenborg J. Long-term stability in vivo of a thromboresistant heparinized surface.
Biomaterials **1987**, 8(6): 496-499.
- 130) Arnander C, Olsson P, Larm O. Influence of blood flow and the effect of protamine on the thromboresistant properties of a covalently bonded heparin surface.
J Biomed Mater Res **1988**, 22(10): 859-868.
- 131) Arnander C. Enhanced patency of small-diameter tubings after surface immobilization of heparin fragments. A study in the dog.
J Biomed Mater Res **1989**, 23(3): 285-294.
- 132) Steen S, Sjoberg T, Massa G, Ericsson L, Lindberg L. Safe pulmonary preservation for 12 hours with low-potassium-dextran solution.
Ann Thorac Surg **1993**, 55(2): 434-440.
- 133) Clutton-Brock TH, Fink S, Markle D, Luthra AJ, Hendry SP. The evaluation of a new intravascular blood gas monitoring system in the pig.
J Clin Monit **1994**, 10(6): 387-391.
- 134) Christiansson L, Hellberg A, Koga I, Thelin S, Bergqvist D, Wiklund L, Karacagil S. A new method of intrathecal PO₂, PCO₂, and pH measurements for continuous monitoring of spinal cord ischemia during thoracic aortic clamping in pigs.
Surgery **2000**, 127(5): 571-576.
- 135) Foley PL, Barthel CH, Brausa HR. Effect of covalently bound heparin coating on patency and biocompatibility of long-term indwelling catheters in the rat jugular vein.
Comp Med **2002**, 52(3): 243-248.
- 136) Levine A, Kenet G, Bruck R, Avni Y, Avinoach I, Aeed H, Matas Z, David M, Yayon A. Effect of heparin on tissue binding activity of fibroblast growth factor and heparin-binding epidermal growth factor in experimental colitis in rats.
Pediatric research **2002**, 51(5): 635-640.
- 137) Piacentini MF, Clinckers R, Meeusen R, Sarre S, Ebinger G, Michotte Y. Effect of bupropion on hippocampal neurotransmitters and on peripheral hormonal concentrations in the rat.
J Appl Physiol **2003**, 95(2): 652-656.

- 138) Buckwalter JB, Curtis VC, Valic Z, Ruble SB, Clifford PS. Endogenous vascular remodeling in ischemic skeletal muscle: a role for nitric oxide.
J Appl Physiol **2003**, 94(3): 935-940.
- 139) Lin PH, Chronos NA, Marijjanowski MM, Chen C, Conklin B, Bush RL, Lumsden AB, Hanson SR. Carotid stenting using heparin-coated balloon-expandable stent reduces intimal hyperplasia in a baboon model.
J Surg Res **2003**, 112(1): 84-90.
- 140) Zareie M, Keuning ED, ter Wee PM, Beelen RH, van den BoJ. Improvement of a chronic rat model for peritoneal dialysis by using heparin-coated catheters.
Advances in peritoneal dialysis. Conference on Peritoneal Dialysis. **2004**, 20: 150-154.
- 141) Wachtman LM, Browning MD, Bedja D, Pin S, Gabrielson KL. Validation of the use of long-term indwelling jugular catheters in a rat model of cardiotoxicity.
Journal of the American Association for Laboratory Animal Science: JAALAS. **2006**, 45(5): 55-64.
- 142) Bridges C. New heparin coating reduces thrombosis and fibrin sheath formation in HD catheters.
Nephrology news & issues **2007**, 21(3): 32.
- 143) Vesely T. Reviewing the benefits of a new heparin-coated hemodialysis catheter.
Renal Business Today **2007**, 2(3).
- 144) Fonseca UN, Nielsen SG, Hau J, Hansen AK. Permanent catheterization of the carotid artery induces kidney infection and inflammation in the rat.
Lab Anim **2009**, Oct 26, 1-8.

Clinical

Extracorporeal Circulation - Cardiovascular Surgery

- 145) Mollnes TE, Videm V, Gotze O, Harboe M, Oppermann M. Formation of C5a during cardiopulmonary bypass: inhibition by precoating with heparin.
Ann Thorac Surg **1991**, 52(1): 92-97.
- 146) Borowiec J, Thelin S, Bagge L, van der Linden J, Thorno E, Hansson HE. Heparin-coated cardiopulmonary bypass circuits and 25% reduction of heparin dose in coronary artery surgery - a clinical study.
Ups J Med Sci **1992**, 97(1): 55-66.
- 147) Videm V, Svennevig JL, Fosse E, Semb G, Osterud A, Mollnes TE. Reduced complement activation with heparin-coated oxygenator and tubings in coronary bypass operations.
J Thorac Cardiovasc Surg **1992**, 103(4): 806-813.
- 148) von Segesser LK, Weiss BM, Garcia E, von Felten A, Turina MI. Reduction and elimination of systemic heparinization during cardiopulmonary bypass.
J Thorac Cardiovasc Surg **1992**, 103(4): 790-798, discussion 798-799.
- 149) Borowiec J, Thelin S, Bagge L, Nilsson L, Venge P, Hansson HE. Heparin-coated circuits reduce activation of granulocytes during cardiopulmonary bypass. A clinical study.
J Thorac Cardiovasc Surg **1992**, 104(3): 642-647.

- 150) Borowiec J, Thelin S, Bagge L, Hultman J, Hansson HE. Decreased blood loss following cardiopulmonary bypass using heparin-coated circuits and 50% reduction of heparin dose.
Scand J Thorac Cardiovasc Surg **1992**, 26(3): 177-185.
- 151) Hollingsed MJ, Hill R, Wittig R, Murray G. Heparin-coated cardiopulmonary bypass: a clinical case incorporating a standard cardiectomy.
Perfusion **1992**, 7: 305-314.
- 152) Couyant MA, Beemer GH. A proposed protocol for the management of cardiopulmonary bypass for patients with heparin-induced thrombosis thrombocytopenia syndrome.
Journal of Australasian perfusion society **1992**.
- 153) Borowiec JW, Bylock A, van der Linden J, Thelin S. Heparin coating reduces blood cell adhesion to arterial filters during coronary bypass: a clinical study.
Ann Thorac Surg **1993**, 55(6): 1540-1545.
- 154) von Segesser LK, Garcia E, Turina MI. Low-dose heparin versus full-dose heparin with high-dose aprotinin during cardiopulmonary bypass. A preliminary report.
Tex Heart Inst J **1993**, 20(1): 28-32.
- 155) Chaiyaroj S, Couyant M, Angelopoulos P, Tatoulis J. Cardiac surgery with low systemic heparinisation using a heparin bonded tubing circuit.
AustralAs J Cardiac Thorac Surg **1993**, 2(1): 30-31.
- 156) Belboul A, Al-Khaja N, Gudmundsson M, Karlsson H, Uchino T, Liu B, El-Gatit A, Bjell A, Roberts D, William-Olsson G. The influence of heparin-coated and uncoated extracorporeal circuits on blood rheology during cardiac surgery.
J Extra Corpor Technol **1993**, 25(2): 40-46.
- 157) von Segesser LK. Use of heparin-bonded surfaces in cardiopulmonary bypass.
Perfusion **1993**, 8 (suppl): 21-27.
- 158) Jones DR, Hill RC, Hollingsed MJ, Stullken E, Graeber GM, Gustafson RA, Murray GF. Use of heparin-coated cardiopulmonary bypass.
Ann Thorac Surg **1993**, 56(3): 566-568.
- 159) Dowling RD, Brown ME, Whittington RO Jr, Quinlan JJ, Armitage JM. Clinical cardiopulmonary bypass without systemic anticoagulation.
Ann Thorac Surg **1993**, 56(5): 1176-1177, discussion 1177-1178.
- 160) Shigemitsu O, Hadama T, Takasaki H, Mori Y, Kimura T, Miyamoto S, Sako H, Soeda T, Kawawaki Y, Uchida Y. Biocompatibility of a heparin-bonded membrane oxygenator (Carmeda MAXIMA) during the first 90 minutes of cardiopulmonary bypass: clinical comparison with the conventional system.
Artif Organs **1994**, 18(12): 936-941.
- 161) Fosse E, Moen O, Johnson E, Semb G, Brockmeier V, Mollnes TE, Fagerhol MK, Venge P. Reduced complement and granulocyte activation with heparin-coated cardiopulmonary bypass.
Ann Thorac Surg **1994**, 58(2): 472-477.

- 162) Kuki S, Yoshida K, Suzuki K, Matsumura R, Okuda A. A successful case of left heart bypass with biocompatible bypass circuit and minimal heparin for severe heart failure after open mitral commissurotomy.
Nippon Kyobu Geka Gakkai Zasshi **1994**, 42(7): 1108-1112.
- 163) Sellevold OF, Berg TM, Rein KA, Levang OW, Iversen OJ, Bergh K. Heparin-coated circuit during cardiopulmonary bypass. A clinical study using closed circuit, centrifugal pump and reduced heparinization.
Acta Anaesthesiol Scand **1994**, 38(4): 372-379.
- 164) Wagner WR, Johnson PC, Thompson KA, Marrone GC. Heparin-coated cardiopulmonary bypass circuits: hemostatic alterations and postoperative blood loss.
Ann Thorac Surg **1994**, 58(3): 734-740, discussion 741.
- 165) Pekna M, Borowiec J, Fagerhol MK, Venge P, Thelin S. Biocompatibility of heparin-coated circuits used in cardiopulmonary bypass.
Scand J Thorac Cardiovasc Surg **1994**, 28(1): 5-11.
- 166) Cheung AT, Levin SK, Weiss SJ, Acker MA, Stenach N. Intracardiac thrombus: a risk of incomplete anticoagulation for cardiac operations.
Ann Thorac Surg **1994**, 58(2): 541-542.
- 167) Hatori N, Yoshizu H, Haga Y, Kusama Y, Takeshima S, Segawa D, Tanaka S. Biocompatibility of heparin-coated membrane oxygenator during cardiopulmonary bypass.
Artif Organs **1994**, 18(12): 904-910.
- 168) Jones DR, Hill RC, Vasilakis A, Hollingsed MJ, Graeber GM, Gustafson RA, Cruzavala JL, Murray GF. Safe use of heparin-coated bypass circuits incorporating a pump-oxygenator.
Ann Thorac Surg **1994**, 57(4): 815-818, discussion 818-819.
- 169) Ovrum E, Mollnes TE, Fosse E, Holen EA, Tangen G, Abdelnoor M, Ringdal MA, Oystese R, Venge P. Complement and granulocyte activation in two different types of heparinized extracorporeal circuits.
J Thorac Cardiovasc Surg **1995**, 110(6): 1623-1632.
- 170) Moen O, Fosse E, Brockmeier V, Andersson C, Mollnes TE, Hogasen K, Venge P. Disparity in blood activation by two different heparin-coated cardiopulmonary bypass systems.
Ann Thorac Surg **1995**, 60(5): 1317-1323.
- 171) Nilsson L, Peterson C, Venge P, Borowiec JW, Thelin S. Eosinophil granule proteins in cardiopulmonary bypass with and without heparin coating.
Ann Thorac Surg **1995**, 59(3): 713-716.
- 172) Borowiec JW, Hagman L, Totterman TH, Pekna M, Venge P, Thelin S. Circulating cytokines and granulocyte-derived enzymes during complex heart surgery. A clinical study with special reference to heparin-coating of cardiopulmonary bypass circuits.
Scand J Thorac Cardiovasc Surg **1995**, 29(4): 167-174.
- 173) Ernofsson M, Thelin S, Siegbahn A. Thrombin generation during cardiopulmonary bypass using heparin-coated or standard circuits.
Scand J Thorac Cardiovasc Surg **1995**, 29(4): 157-165.

- 174) Steinberg BM, Grossi EA, Schwartz DS, McLoughlin DE, Aguinaga M, Bizekis C, Greenwald J, Flisser A, Spencer FC, Galloway AC, Colvin SB. Heparin bonding of bypass circuits reduces cytokine release during cardiopulmonary bypass. *Ann Thorac Surg* **1995**, 60(3): 525-529.
- 175) Moen O, Fosse E, Dregelid E, Brockmeier V, Andersson C, Hogasen K, Venge P, Mollnes TE, Kierulf P. Centrifugal pump and heparin coating improves cardiopulmonary bypass biocompatibility. *Ann Thorac Surg* **1996**, 62(4): 1134-1140.
- 176) von Segesser LK. Surface coating of cardiopulmonary bypass circuits. *Perfusion* **1996**, 11(3): 241-245.
- 177) Rao PS, Palazzo RS, Harlow GL, Bocchieri KA, Metz HN, Wilson DW, Rao SK, Graver LM. Myocardial preservation, redox potential maintenance and oxidant injury by heparin-coated Carmeda circuit. *Ann N Y Acad Sci* **1996**, 793: 511-513.
- 178) Fukutomi M, Kobayashi S, Niwaya K, Hamada Y, Kitamura S. Changes in platelet, granulocyte, and complement activation during cardiopulmonary bypass using heparin-coated equipment. *Artif Organs* **1996**, 20(7): 767-776.
- 179) Toda R, Saigenji H, Nishida T, Moriyama Y, Masuda H, Taira A. A case of ASD with SLE treated with Carmeda BioActive surface circuit in cardiopulmonary bypass system. *Kyobu Geka* **1996**, 49(5): 389-391.
- 180) Saenz A, Larranaga G, Alvarez L, Greco E, Marrero A, Lunar M, Elosegui C, Ubago JL, Gallo I. Heparin-coated circuit in coronary surgery. A clinical study. *Eur J Cardiothorac Surg* **1996**, 10(1): 48-53.
- 181) Gorman RC, Ziats N, Rao AK, Gikakis N, Sun L, Khan MM, Stenach N, Sapatnekar S, Chouhan V, Gorman JH 3rd, Niewiarowski S, Colman RW, Anderson JM, Edmunds LH Jr. Surface-bound heparin fails to reduce thrombin formation during clinical cardiopulmonary bypass. *J Thorac Cardiovasc Surg* **1996**, 111(1): 1-11, discussion 11-12.
- 182) Watanabe H, Miyamura H, Hayashi J, Ohzeki H, Sugawara M, Takahashi Y, Eguchi S. The influence of a heparin-coated oxygenator during cardiopulmonary bypass on postoperative lung oxygenation capacity in pediatric patients with congenital heart anomalies. *J Card Surg* **1996**, 11(6): 396-401.
- 183) Bozdayi M, Borowiec J, Nilsson L, Venge P, Thelin S, Hansson HE. Effects of heparin coating of cardiopulmonary bypass circuits on in vitro oxygen free radical production during coronary bypass surgery. *Artif Organs* **1996**, 20(9): 1008-1016.
- 184) Ovrum E, Brosstad F, Am Holen E, Tangen G, Abdelnoor M, Oystese R. Complete heparin-coated (CBAS) cardiopulmonary bypass and reduced systemic heparin dose, effects on coagulation and fibrinolysis. *Eur J Cardiothorac Surg* **1996**, 10(6): 449-455.
- 185) Matheve C. Clinical evidence of improved biocompatibility using heparin-coated surfaces. *Perfusion* **1996**, 11(3): 264-269.

- 186) Shapira OM, Aldea GS, Zelingher J, Volpe C, Fitzgerald C, DeAndrade K, Lazar HL, Shemin RJ. Enhanced blood conservation and improved clinical outcome after valve surgery using heparin-bonded cardiopulmonary bypass circuits.
J Card Surg **1996**, 11(5): 307-317.
- 187) Aldea GS, Doursounian M, O'Gara P, Treanor P, Shapira OM, Lazar HL, Shemin RJ. Heparin-bonded circuits with a reduced anticoagulation protocol in primary CABG: a prospective, randomized study.
Ann Thorac Surg **1996**, 62(2): 410-417, discussion 417-418.
- 188) Aldea GS, Shapira OM, Treanor PR, Lazar HL, Shemin RJ. Effective use of heparin-bonded circuits and lower anticoagulation for coronary artery bypass grafting in Jehovah's Witnesses.
J Card Surg **1996**, 11(1): 12-17.
- 189) Aldea GS, Zhang X, Memmolo CA, Shapira OM, Treanor PR, Kupferschmid JP, Lazar HL, Shemin RJ. Enhanced blood conservation in primary coronary artery bypass surgery using heparin-bonded circuits with lower anticoagulation.
J Card Surg **1996**, 11(2): 85-95.
- 190) Ovrum E, Fosse E, Mollnes TE, Am Holen E, Tangen G, Abdelnoor M, Ringdal MA, Oystese R, Venge P. Complete heparin-coated cardiopulmonary bypass and low heparin dose reduce complement and granulocyte activation.
Eur J Cardiothorac Surg **1996**, 10(1): 54-60.
- 191) Ganjoo AK, Harloff MG, Johnson WD. Cardiopulmonary bypass for heparin-induced thrombocytopenia: management with a heparin-bonded circuit and enoxaparin.
J Thorac Cardiovasc Surg **1996**, 112(5): 1390-1392.
- 192) Peters FP. Treatment of heparin-induced thrombocytopenia.
J Thorac Cardiovasc Surg **1997**, 114(3): 517-518.
- 193) Aldea GS, Lilly K, Gaudiani JM, O'Gara P, Stein D, Bao Y, Treanor P, Osman A, Shapira OM, Lazar HL, Shemin RJ. Heparin-bonded circuits improve clinical outcomes in emergency coronary artery bypass grafting.
J Card Surg **1997**, 12(6): 389-397.
- 194) Rao SK, Palazzo RS, Metz HN, Wilson DW, Nikolic SD, Graver M, Rao PS. Redox potential measurements of plasma in patients undergoing coronary artery bypass graft and its clinical significance.
J Pharmacol Toxicol Methods **1997**, 38(3): 151-156.
- 195) Misoph M, Babin-Ebell J, Schwender S. A comparative evaluation of the effect of pump type and heparin-coated surfaces on platelets during cardiopulmonary bypass.
Thorac Cardiovasc Surg **1997**, 45(6): 302-306.
- 196) Lundblad R, Moen O, Fosse E. Endothelin-1 and neutrophil activation during heparin-coated cardiopulmonary bypass.
Ann Thorac Surg **1997**, 63(5): 1361-1367.
- 197) Borowiec J, Bagge L, Saldeen T, Thelin S. Biocompatibility reflected by haemostasis variables during cardiopulmonary bypass using heparin-coated circuits.
Thorac Cardiovasc Surg **1997**, 45(4): 163-167.

- 198) Svenmarker S, Haggmark S, Jansson E, Lindholm R, Appelblad M, Aberg T. The relative safety of an oxygenator.
Perfusion **1997**, 12(5): 289-292.
- 199) Kagisaki K, Masai T, Kadoba K, Sawa Y, Nomura F, Fukushima N, Ichikawa H, Ohata T, Suzuki K, Taketani S, Matsuda H. Biocompatibility of heparin-coated circuits in pediatric cardiopulmonary bypass.
Artif Organs **1997**, 21(7): 836-840.
- 200) Ljunghusen O, Cederholm I, Lundahl J, Nilsson B, Olin C, Sjogren F, Stendahl O. Phenotypic alterations in circulating monocytes induced by open heart surgery using heparinized and nonheparinized cardiopulmonary bypass systems.
Artif Organs **1997**, 21(10): 1091-1097.
- 201) Ashraf S, Tian Y, Cowan D, Entress A, Martin PG, Watterson KG. Release of proinflammatory cytokines during pediatric cardiopulmonary bypass: heparin-bonded versus nonbonded oxygenators.
Ann Thorac Surg **1997**, 64(6): 1790-1794.
- 202) Belboul A, al-Khaja N. Does heparin coating improve biocompatibility? A study on complement, blood cells and postoperative morbidity during cardiac surgery.
Perfusion **1997**, 12(6): 385-391.
- 203) Bannan S, Danby A, Cowan D, Ashraf S, Martin PG. Low heparinization with heparin-bonded bypass circuits: is it a safe strategy?
Ann Thorac Surg **1997**, 63(3): 663-668.
- 204) Svenmarker S, Sandstrom E, Karlsson T, Jansson E, Haggmark S, Lindholm R, Appelblad M, Aberg T. Clinical effects of the heparin coated surface in cardiopulmonary bypass.
Eur J Cardiothorac Surg JT **1997**, 11(5): 957-964.
- 205) Schreurs HH, Wijers MJ, Gu YJ, van Oeveren W, van Domburg RT, de Boer JH, Bogers AJ. Heparin-coated bypass circuits: effects on inflammatory response in pediatric cardiac operations.
Ann Thorac Surg **1998**, 66(1): 166-171.
- 206) Spiess BD, Vocelka C, Cochran RP, Soltow L, Chandler WL. Heparin-coated bypass circuits (Carmeda) suppress the release of tissue plasminogen activator during normothermic coronary artery bypass graft surgery.
J Cardiothorac Vasc Anesth **1998**, 12(3): 299-304.
- 207) Baufreton C, Moczar M, Intrato L, Jansen PG, te Velthuis H, Le Besnerais P, Farcet JP, Wildevuur CR, Loisanse DY. Inflammatory response to cardiopulmonary bypass using two different types of heparin-coated extracorporeal circuits.
Perfusion **1998**, 13(6): 419-427.
- 208) Misoph M, Schwender S, Babin-Ebell J. Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces.
Thorac Cardiovasc Surg **1998**, 46(4): 222-227.
- 209) Gott JP, Cooper WA, Schmidt FE Jr, Brown WM 3rd, Wright CE, Merlino JD, Fortenberry JD, Clark WS, Guyton RA. Modifying risk for extracorporeal circulation: trial of four antiinflammatory strategies.
Ann Thorac Surg **1998**, 66(3): 747-753, discussion 753-754.

- 210) Wahba A, Philipp A, Behr R, Birnbaum DE. Heparin-coated equipment reduces the risk of oxygenator failure.
Ann Thorac Surg **1998**, 65(5): 1310-1312.
- 211) Mahoney CB. Heparin-bonded circuits: clinical outcomes and costs.
Perfusion **1998**, 13(3): 192-204.
- 212) Stammers AH, Christensen KA, Lynch J, Zavadil DP, Deptula JJ, Sydzyk RT. Quantitative evaluation of heparin-coated versus non-heparin-coated bypass circuits during cardiopulmonary bypass.
J Extra Corpor Technol **1999**, 31(3): 135-141.
- 213) Mahoney CB, Lemole GM. Transfusion after coronary artery bypass surgery: the impact of heparin-bonded circuits.
Eur J Cardiothorac Surg **1999**, 16(2): 206-210.
- 214) Palanzo DA, Zarro DL, Manley NJ, Montesano RM, Quinn M, Gustafson PA. Effect of surface coating on platelet count drop during cardiopulmonary bypass.
Perfusion **1999**, 14(3): 195-200.
- 215) Suehiro S, Shibata T, Sasaki Y, Hattori K, Kumano H, Hosono M, Kinoshita H. Use of heparin-coated cardiopulmonary bypass circuit with low-dose heparin reduces postoperative bleeding.
Ann Thorac Cardiovasc Surg **1999**, 5(4): 225-229.
- 216) Suehiro S, Shibata T, Sasaki Y, Hattori K, Kumano H, Hosono M, Fujii H, Kinoshita H. Heparin-coated circuits prevent renal dysfunction after open heart surgery.
Osaka City Med J **1999**, 45(2): 149-157.
- 217) Olsson C, Siegbahn A, Henze A, Nilsson B, Venge P, Joachimsson PO, Thelin S. Heparin-coated cardiopulmonary bypass circuits reduce circulating complement factors and interleukin-6 in paediatric heart surgery.
Scand Cardiovasc J **2000**, 34(1): 33-40.
- 218) Grossi EA, Kallenbach K, Chau S, Derivaux CC, Aguinaga MG, Steinberg BM, Kim D, Iyer S, Tayyarah M, Artman M, Galloway AC, Colvin SB. Impact of heparin bonding on pediatric cardiopulmonary bypass: a prospective randomized study.
Ann Thorac Surg **2000**, 70(1): 191-196.
- 219) Collart F, Caus T, Pomane C, Pellissier V, Chi Y, Monties JR, Mesana T. Clinical evaluation of heparin-coated circuits for routine coronary artery bypass grafting surgery: a prospective randomized study.
Artif Organs **2000**, 24(8): 611-613.
- 220) Miyaji K, Hannan RL, Ojito J, Jacobs JP, White JA, Burke RP. Heparin-coated cardiopulmonary bypass circuit: clinical effects in pediatric cardiac surgery.
J Card Surg **2000**, 15(3): 194-198.
- 221) Ralley FE, De Varennes B. Use of heparinase I in a patient with protamine allergy undergoing redo myocardial revascularization.
J Cardiothorac Vasc Anesth **2000**, 14(6): 710-711.

- 222) Svenmarker S, Sandstrom E, Karlsson T, Haggmark S, Jansson E, Appelblad M, Lindholm R, Aberg T. Neurological and general outcome in low-risk coronary artery bypass patients using heparin coated circuits.
Eur J Cardiothorac Surg **2001**, 19(1): 47-53.
- 223) von Segesser LK. Safety and efficacy of heparin-bonded surfaces in cardiopulmonary bypass.
J Thorac Cardiovasc Surg **2001**, 121(2): 200-201.
- 224) Palanzo DA, Zarro DL, Manley NJ, Montesano RM, Quinn M, Elmore BA, Gustafson PA, Castagna JM. Effect of Carmeda BioActive Surface coating versus Trillium Biopassive Surface coating of the oxygenator on circulating platelet count drop during cardiopulmonary bypass.
Perfusion **2001**, 16(4): 279-283.
- 225) Ovrum E, Tangen G, Oystese R, Ringdal MA, Istad R. Comparison of two heparin-coated extracorporeal circuits with reduced systemic anticoagulation in routine coronary artery bypass operations.
J Thorac Cardiovasc Surg **2001**, 121(2): 324-330.
- 226) Mongero LB, Beck JR, Manspeizer HE, Heyer EJ, Lee K, Spanier TA, Smith CR. Cardiac surgical patients exposed to heparin-bonded circuits develop less postoperative cerebral dysfunction than patients exposed to non-heparin-bonded circuits.
Perfusion **2001**, 16(2): 107-111.
- 227) Wendel HP, Philipp A, Weber N, Birnbaum DE, Ziemer G. Oxygenator thrombosis: worst case after development of an abnormal pressure gradient - incidence and pathway.
Perfusion **2001**, 16(4): 271-278.
- 228) Flom-Halvorsen HI, Ovrum E, Brosstad F, Tangen G, Ringdal M, Oystese R. Effects of two differently heparin-coated extracorporeal circuits on markers for brain and myocardial dysfunction.
Perfusion **2002**, 17(5): 339-345.
- 229) Svenmarker S, Haggmark S, Jansson E, Lindholm R, Appelblad M, Sandstrom E, Aberg T. Use of heparin-bonded circuits in cardiopulmonary bypass improves clinical outcome.
Scand Cardiovasc J **2002**, 36(4): 241-246.
- 230) Heyer EJ, Lee KS, Manspeizer HE, Mongero L, Spanier TB, Caliste X, Esrig B, Smith C. Heparin-bonded cardiopulmonary bypass circuits reduce cognitive dysfunction.
J Cardiothorac Vasc Anesth **2002**, 16(1): 37-42.
- 231) Mullen JC, Bentley MJ, Gelfand ET, Koshal A, Modry DL, Guenther CR, Etches WS, Stang LJ, Lopushinsky SR. Coronary artery bypass surgery with heparin-coated perfusion circuits and low-dose heparinization.
Can J Surg **2002**, 45(3): 166-172.
- 232) Jensen E, Andreasson S, Bengtsson A, Berggren H, Ekroth R, Lindholm L, Ouchterlony J. Influence of two different perfusion systems on inflammatory response in pediatric heart surgery.
Ann Thorac Surg **2003**, 75(3): 919-925.

- 233) Ovrum E, Tangen G, Tollofsrud S, Ringdal MA. Heparin-coated circuits and reduced systemic anticoagulation applied to 2500 consecutive first-time coronary artery bypass grafting procedures.
Ann Thorac Surg **2003**, 76(4): 1144-1148, discussion 1148.
- 234) van den GoJ, van den BrA, Nieuwland R, van Oeveren W, Rutten PM, Tepaske R, Tijssen JG, Sturk A, de Mol BA, Eijssman L. Generation of platelet-derived microparticles in patients undergoing cardiac surgery is not affected by complement activation.
J Thorac Cardiovasc Surg **2003**, 126(4): 1101-1106.
- 235) Lilly KJ, O'Gara PJ, Treanor PR, Reardon D, Crowley R, Hunter C, Shapira OM, Aldea GS, Lazar HL, Shemin RJ. Cardiopulmonary bypass: it's not the size, it's how you use it! Review of a comprehensive blood-conservation strategy.
J Extra Corpor Technol **2004**, 36(3): 263-268.
- 236) Lindholm L, Westerberg M, Bengtsson A, Ekroth R, Jensen E, Jeppsson A. A closed perfusion system with heparin coating and centrifugal pump improves cardiopulmonary bypass biocompatibility in elderly patients.
Ann Thorac Surg **2004**, 78(6): 2131-2138, discussion 2138.
- 237) van den GoJ, Nieuwland R, van den BrA, van Oeveren W, Rutten P, Tijssen J, Eijssman L. Reduced complement activation during cardiopulmonary bypass does not affect the postoperative acute phase response.
Eur J Cardiothorac Surg **2004**, 26(5): 926-931.
- 238) Boning A, Scheewe J, Ivers T, Friedrich C, Stieh J, Freitag S, Cremer JT. Phosphorylcholine or heparin coating for pediatric extracorporeal circulation causes similar biologic effects in neonates and infants.
J Thorac Cardiovasc Surg **2004**, 127(5): 1458-1465.
- 239) Eisses MJ, Seidel K, Aldea GS, Chandler WL. Reducing hemostatic activation during cardiopulmonary bypass: a combined approach.
Anesth Analg **2004**, 98(5): 1208-1216.
- 240) Jensen E, Andreasson S, Bengtsson A, Berggren H, Ekroth R, Larsson LE, Ouchterlony J. Changes in hemostasis during pediatric heart surgery: impact of a biocompatible heparin-coated perfusion system.
Ann Thorac Surg **2004**, 77(3): 962-967.
- 241) Baufreton C, Allain P, Chevailler A, Etcharry-Bouyx F, Corbeau JJ, Legall D, de Brux JL. Brain injury and neuropsychological outcome after coronary artery surgery are affected by complement activation.
Ann Thorac Surg **2005**, 79(5): 1597-1605.
- 242) Kreisler KR, Vance RA, Cruzzavala J, Mahnken JD. Heparin-bonded cardiopulmonary bypass circuits reduce the rate of red blood cell transfusion during elective coronary artery bypass surgery.
J Cardiothorac Vasc Anesth **2005**, 19(5): 608-611.
- 243) Jessen ME. Pro: Heparin-coated circuits should be used for cardiopulmonary bypass.
Anesthesia and analgesia **2006**, 103(6): 1365-1372.
- 244) Taneja R, Cheng DC. Con: Heparin-bonded cardiopulmonary bypass circuits should be routine for all cardiac surgical procedures.
Anesthesia and analgesia **2006**, 103(6): 1370-1372.

- 245) Schneider S, Sakert T, Lucke J, McKeown P, Sharma A. Cardiopulmonary bypass for a coronary artery bypass graft patient with heterozygous protein C deficiency and protein S deficiency.
Perfusion JT **2006**, 21(2): 117-120.
- 246) Eisses MJ, Velan T, Aldea GS, Chandler WL. Strategies to reduce hemostatic activation during cardiopulmonary bypass.
Thromb Res **2006**, 117(6): 689-703.
- 247) Poynter JA. Thromboresistant cardiopulmonary bypass circuits: room for improvement?
J Surg Res **2010**, 163(2): e51-52.
- 248) Preston TJ, Ratliff TM, Gomez D, Olshove VE Jr, Nicol KK, Sargel CL, Chicoine LG. Modified surface coatings and their effect on drug adsorption within the extracorporeal life support circuit.
J Extra Corpor Technol **2010**, 42(3): 199-202.
- 249) Singh AK, Stearns G, Maslow A, Feng WC, Schwartz C. Redo Sternotomy for Cardiac Reoperations Using Peripheral Heparin-Bonded Cardiopulmonary Bypass Circuits Without Systemic Heparinization: Technique and Results.
J Cardiothorac Vasc Anesth **2011**, 25(2): 347-352.
- 250) Ovrum E, Tangen G, Tollofsrud S, Skeie B, Ringdal MA, Istad R, Oystese R. Heparinized cardiopulmonary bypass circuits and low systemic anticoagulation: An analysis of nearly 6000 patients undergoing coronary artery bypass grafting.
J Thorac Cardiovasc Surg **2011**, 141(5): 1145-1149.
- 251) Hussaini BE, Thatte HS, Rhodes BA, Treanor PR, Birjiniuk V. Thromboresistant surfaces with low-dose anticoagulation alleviate clopidogrel-related complications in patients undergoing coronary artery bypass grafting.
J Thorac Cardiovasc Surg **2011**, 141(3): 782-788.
- 252) Yu K, Long C, Hei F, Li J, Liu J, Ji B, Gao G, Zhang H, Song Y, Wang W. Clinical evaluation of two different extracorporeal membrane oxygenation systems: a single center report.
Artif Organs **2011**, 35(7): 733-737.
- 253) Nozohoor S, Johnsson P, Scicluna S, Wallentin P, Andell E, Nilsson J. A case-controlled evaluation of the Medtronic Resting Heart System compared with conventional cardiopulmonary bypass in patients undergoing isolated coronary artery bypass surgery.
Interact Cardiovasc Thorac Surg **2012**, 14: 599-604.
- 254) Nilsson J, Scicluna S, Malmkvist G, Pierre L. A randomized study of coronary artery bypass surgery performed with the Resting Heart System utilizing a low vs a standard dosage of heparin.
Interact Cardiovasc Thorac Surg **2012**, 15(5): 834-839.
- 255) Chryssos A, Stroup SJ, Pifer MM, Tawil M, Conrad CG. Management of Heparin-Resistant Patients with Benefits? Maximizing Biocompatibility in Cardiopulmonary Bypass: Combining ATryn® Recombinant Antithrombin III and Carmeda® Heparin-Bonded Perfusion Circuits: A Case Series.
The journal of extra-corporeal technology **2015**, 47(1): 44-47.

- 256) Giorni C, Pezzella C, Bojan M, Ricci Z, Pouard P, Raisky O, Tourneur L, La Salvia O, Favia I, Borgel D, Cogo P, Carotti A, Lasne D. Impact of Heparin- or Nonheparin-Coated Circuits on Platelet Function in Pediatric Cardiac Surgery. *Ann Thorac Surg* **2019**, 107(4): 1241-1247.

Clinical

Extracorporeal Circulation - Long Term Assist

- 257) Bindslev L, Eklund J, Norlander O, Swedenborg J, Olsson P, Nilsson E, Larm O, Gouda I, Malmberg A, Scholander E. Treatment of acute respiratory failure by extracorporeal carbon dioxide elimination performed with a surface heparinized artificial lung. *Anesthesiology* **1987**, 67(1): 117-120.
- 258) Peters J, Radermacher P, Kuntz ME, Rosenbauer KA, Breulmann M, Burrig KF, Hopf HB, Rossaint R, Schulte HD, Olsson P. Extracorporeal CO₂-removal with a heparin coated artificial lung. *Intensive Care Med* **1988**, 14(5): 578-584.
- 259) Bindslev L. Adult ECMO performed with surface-heparinized equipment. *ASAIO Trans* **1988**, 34(4): 1009-1013.
- 260) Rossaint R, Slama K, Bauer R, Nienhaus M, Barth H, Weidemann H, Falke KJ. Extracorporeal CO₂-removal with a heparin coated extracorporeal system. *Intensive Care Med* **1990**, 16(5): 344-345.
- 261) Bjertnaes LJ, Olafsen K, Nilsen PA, Brondbo A, Thoner J, Vaage J, Solbo J, Hansen K, Jolin A. Extracorporeal membrane oxygenation. A therapeutic alternative in acute heart and/or pulmonary failure? (Article in Norwegian). *Tidsskr Nor Laegeforen* **1991**, 111(12): 1477-1480.
- 262) Bindslev L, Bohm C, Jolin A, Hambraeus Jonzon K, Olsson P, Ryniak S. Extracorporeal carbon dioxide removal performed with surface-heparinized equipment in patients with ARDS. *Acta Anaesthesiol Scand Suppl* **1991**, 95: 125-30, discussion 130-131.
- 263) Koul B, Wetterberg T, Ohqvist G, Olsson P. Veno-venous extracorporeal membrane oxygenation with a heparin-coated system in adult respiratory distress syndrome. *Scand J Thorac Cardiovasc Surg* **1991**, 25(3): 199-206.
- 264) Wetterberg T, Steen S. Total extracorporeal lung assist - a new clinical approach. *Intensive Care Med* **1991**, 17(2): 73-77.
- 265) Knoch M, Kollen B, Dietrich G, Muller E, Mottaghy K, Lennartz H. Progress in veno-venous long-term bypass techniques for the treatment of ARDS. Controlled clinical trial with the heparin-coated bypass circuit. *Int J Artif Organs* **1992**, 15(2): 103-108.
- 266) Rossaint R, Slama K, Lewandowski K, Frey DJ, Weidemann H, Fuchs J, Nienhaus M, Henin P, Falke K. Major thoracic surgery during long-term extracorporeal lung assist for treatment of severe adult respiratory distress syndrome (ARDS). *Eur J Cardiothorac Surg* **1992**, 6(1): 43-45.
- 267) Rossaint R, Slama K, Lewandowski K, Streich R, Henin P, Hopfe T, Barth H, Nienhaus M, Weidemann H, Lemmens P. Extracorporeal lung assist with heparin-coated systems. *Int J Artif Organs* **1992**, 15(1): 29-34.

- 268) Willms D, Dembitsky W. Prolonged extracorporeal support for ARDS using surface-heparinized equipment.
Chest **1992**, 102(3): 968-970.
- 269) Bennett J, Hill J, Long W, Parsons J, Bruhn P, Starr A, Hovaguimian H, Okies JE. Biocompatible circuits: an adjunct to non-cardiac extracorporeal cardiopulmonary support.
J Extra Corpor Technol **1992**, 24(2): 6-11.
- 270) Aranki SF, Adams DH, Rizzo RJ, Couper GS, DeCamp MM, Fitzgerald DJ, Cohn LH. Femoral veno-arterial extracorporeal life support with minimal or no heparin.
Ann Thorac Surg **1993**, 56(1): 149-155.
- 271) Tsuno K, Terasaki H, Otsu T, Okamoto T, Sakanashi Y, Morioka T. Newborn extracorporeal lung assist using a novel double lumen catheter and a heparin-bonded membrane lung.
Intensive Care Med **1993**, 19(2): 70-72.
- 272) Fjalldal O, Torfason B, Onundarson PT, Thorsteinsson A, Vigfusson G, Stefansson T, Magnusson V. Prolonged total extracorporeal lung assistance without systemic heparinization.
Acta Anaesthesiol Scand **1993**, 37(1): 115-120.
- 273) Lazzara RR, Magovern JA, Benckart DH, Maher TD Jr, Sakert T, Magovern GJ Jr. Extracorporeal membrane oxygenation for adult post cardiectomy cardiogenic shock using a heparin bonded system.
ASAIO J **1993**, 39(3): M444-447.
- 274) Bennett JB, Hill JG, Long WB 3rd, Bruhn PS, Haun MM, Parsons JA. Interhospital transport of the patient on extracorporeal cardiopulmonary support.
Ann Thorac Surg **1994**, 57(1): 107-111.
- 275) Willms DC, Wachtel TL, Daleiden AL, Dembitsky WP, Schibanoff JM, Gibbons JA. Venovenous extracorporeal life support in traumatic bronchial disruption and adult respiratory distress syndrome using surface-heparinized equipment: case report.
J Trauma **1994**, 36(2): 252-254.
- 276) Magovern GJ Jr, Magovern JA, Benckart DH, Lazzara RR, Sakert T, Maher TD Jr, Clark RE. Extracorporeal membrane oxygenation: preliminary results in patients with postcardiotomy cardiogenic shock.
Ann Thorac Surg **1994**, 57(6): 1462-1468, discussion 1469-1471.
- 277) Muehrcke DD, McCarthy PM, Stewart RW, Seshagiri S, Ogella DA, Foster RC, Cosgrove DM. Complications of extracorporeal life support systems using heparin-bound surfaces. The risk of intracardiac clot formation.
J Thorac Cardiovasc Surg **1995**, 110(3): 843-851.
- 278) Ehren H, Palmer K, Eriksson M, Frenckner B. Pediatric ECMO for pulmonary support: experience from 12 cases.
Acta Paediatr **1995**, 84(4): 442-446.
- 279) Yamanishi H, Watanabe S, Hayashi K. [Relatively long time use of percutaneous cardiopulmonary support after unsuccessful weaning from intra-operative extracorporeal circulation--clinical considerations from an experience of 5 patients].
Nippon Kyobu Geka Gakkai Zasshi JT **1995**, 43(10): 1783-1787.

- 280) Wang SS, Chen YS, Ko WJ, Chu SH. Extracorporeal membrane oxygenation support for postcardiotomy cardiogenic shock.
Artif Organs **1996**, 20(12): 1287-1291.
- 281) del Nido PJ. Extracorporeal membrane oxygenation for cardiac support in children.
Ann Thorac Surg **1996**, 61(1): 336-339, discussion 340-341.
- 282) Muehrcke DD, McCarthy PM, Stewart RW, Foster RC, Ogella DA, Borsh JA, Cosgrove DM 3rd. Extracorporeal membrane oxygenation for postcardiotomy cardiogenic shock.
Ann Thorac Surg **1996**, 61(2): 684-691.
- 283) Musch G, Verweij M, Bombino M, Banfi G, Fumagalli R, Pesenti A. Small pore size microporous membrane oxygenator reduces plasma leakage during prolonged extracorporeal circulation: a case report.
Int J Artif Organs **1996**, 19(3): 177-180.
- 284) Ko WJ, Chen YS, Chou NK, Wang SS, Chu SH. Extracorporeal membrane oxygenation in the perioperative period of heart transplantation.
J Formos Med Assoc **1997**, 96(2): 83-90.
- 285) Gerlach M, Fohre B, Keh D, Riess H, Falke KJ, Gerlach H. Global and extended coagulation monitoring during extracorporeal lung assist with heparin-coated systems in ARDS patients.
Int J Artif Organs **1997**, 20(1): 29-36.
- 286) Usui A, Murakami F, Ooshima H, Tomita Y, Yoshida K, Hibi M, Kawamura M, Muras M. A clinical study for the durability of oxygenators on cardiopulmonary support.
Artif Organs **1997**, 21(7): 772-778.
- 287) Karle VA, Short BL, Martin GR, Bulas DI, Getson PR, Luban NL, O'Brien AM, Rubin RJ. Extracorporeal membrane oxygenation exposes infants to the plasticizer, di(2-ethylhexyl)phthalate.
Crit Care Med **1997**, 25(4): 696-703.
- 288) Jacobs JP, Ojito JW, McConaghey TW, Boden BD, Chang AC, Aldousany A, Zahn EM, Burke RP. Rapid cardiopulmonary support for children with complex congenital heart disease.
Ann Thorac Surg **2000**, 70(3): 742-749, discussion 749-750.
- 289) Chou NK, Chen YS, Ko WJ, Huang SC, Chao A, Jan GJ, Lin FY, Wang SS, Chu SH. Application of extracorporeal membrane oxygenation in adult burn patients.
Artif Organs **2001**, 25(8): 622-626.
- 290) Pereszlenyi A, Lang G, Steltzer H, Hetz H, Kocher A, Neuhauser P, Wisser W, Klepetko W. Bilateral lung transplantation with intra- and postoperatively prolonged ECMO support in patients with pulmonary hypertension.
Eur J Cardiothorac Surg **2002**, 21(5): 858-863.
- 291) Lin R, Tan LH, Zhang ZW, Sun MY, Du LZ. [Extracorporeal membrane oxygenation treatment of a neonate with severe low cardiac output syndrome following open heart surgery].
Zhonghua Er Ke Za Zhi **2008**, 46(1): 26-29.

- 292) Zhao J, Liu J, Feng Z, Hu S, Liu Y, Sheng X, Li S, Wang X, Long C. Clinical outcomes and experience of 20 pediatric patients treated with extracorporeal membrane oxygenation in Fuwai Hospital. *ASAIO J* **2008**, 54(3): 302-305.

Clinical

Extracorporeal Circulation - Other

- 293) Jolin A, Eden E, Berggren H, Roos A, von Essen C, Stephensen H, Hedstrom A, Karlsson H, Lindholm-Fransson L, Ricksten SE. Management of a giant intracranial aneurysm using surface-heparinized extracorporeal circulation and controlled deep hypothermic low flow perfusion. A case report. *Acta Anaesthesiol Scand* **1993**, 37(8): 756-760.
- 294) Contino JP, Follette DM, Berkoff HA, Pollock ME, Bogren H, Wisner DH. Use of Carmeda-coated femoral-femoral bypass during repair of traumatic aortic pseudoaneurysms. *Arch Surg* **1994**, 129(9): 933-937, discussion 937-939.
- 295) Sander-Jensen K, Krogager G, Pettersson G. Left atrial-aortic/femoral bypass with a centrifugal pump without systemic heparin during surgery on the descending aorta. *Artif Organs* **1995**, 19(7): 774-776.
- 296) Tyndal CM Jr, Rose MW, McFalls RE, Jacks A, Pinson T, Athanasuleas CL. Profound accidental hypothermia in the deep South: clinical experience. *Perfusion* **1996**, 11(1): 57-60.
- 297) Morishita K, Inoue S, Baba T, Sakata J, Kazui T, Abe T. Our distal aortic perfusion system in descending thoracic and thoracoabdominal aortic aneurysm repairs. *Artif Organs* **1997**, 21(7): 822-824.
- 298) Sasaki A, Kazui T, Ohkawa Y, Doi H, Sugiki K, Ohno T. A case of two stage operation of thoracic and thoracoabdominal aortic aneurysm of a patient in late phase with Behcet's disease. *Kyobu Geka* **1997**, 50(11): 954-957.
- 299) Mesana T, Collart F, Caus T, Pomane C, Graziani N, Bruder N, Dufour H, Grisoli F, Monties JR. Centrifugal pumps and heparin-coated circuits in surgical treatment of giant cerebral aneurysms. *Artif Organs* **2000**, 24(6): 431-436.
- 300) Hattori K, Suehiro S, Shibata T, Sasaki Y, Kumano H, Kinoshita H. Use of A heparin-coated circuit for extracorporeal circulation with selective cerebral perfusion. *Osaka City Med J* **2000**, 46(2): 111-118.
- 301) Ko WJ, Chen YS, Lee YC. Replacing cardiopulmonary bypass with extracorporeal membrane oxygenation in lung transplantation operations. *Artif Organs* **2001**, 25(8): 607-612.
- 302) Scholz T, Solberg R, Okkenhaug C, Videm V, Gallimore MJ, Mathisen O, Mollnes TE, Bergan A, Soreide O, Klintmalm GB, Aasen AO. The significance of heparin-coated veno-venous bypass circuits in liver transplantation. *Perfusion* **2002**, 17(1): 45-50.

- 303) Hachiro Y, Morishita K, Koshima R, Nakashima S, Takagi N, Tsukamoto M, Abe T, Hashi K. Hypothermia with heparin-coated circuits and low dose systemic heparinization in neurosurgery.
Artif Organs **2002**, 26(6): 551-555.
- 304) Morishita K, Kawaharada N, Fukada J, Hachiro Y, Kurimoto Y, Fujisawa Y, Saito T, Abe T. Descending thoracic aortic aneurysm repair with the aid of partial cardiopulmonary bypass: heparin-coated circuits versus nonheparin-coated circuits.
Artif Organs **2005**, 29(4): 300-305.
- 305) Miraziz R, Hines L, Brouwer M, Steel R, Klineberg P. Bridging circuit for the resection of retroperitoneal sarcoma involving the aorta and the IVC- veno-venous to veno-arterial perfusion.
Perfusion **2008**, 23(1): 65-69.

Clinical

Ventricular Assist

- 306) Bianchi JJ, Swartz MT, Raithel SC, Braun PR, Illes MZ, Barnett MG, Pennington DG, Initial clinical experience with centrifugal pumps coated with the Carmeda process.
ASAIO J **1992**, 38(3): M143-146.
- 307) Nishida H, Koyanagi H, Hashimoto A, Endo M, Aomi S, Koyanagi T, Hirota J, Tagusari O, Yamaki F. Clinical experience of assisted circulation with a centrifugal pump at Tokyo Women's Medical College.
Artif Organs **1993**, 17(7): 625-629.
- 308) Magovern GJ Jr. The biopump and postoperative circulatory support.
Ann Thorac Surg **1993**, 55(1): 245-249.
- 309) Williams MR, Quaegebeur JM, Hsu DT, Addonizio LJ, Kichuk MR, Oz MC. Biventricular assist device as a bridge to transplantation in a pediatric patient.
Ann Thorac Surg **1996**, 62(2): 578-580.
- 310) Kaufmann F, Hennig E, Loebe M, Hetzer R. Improving the Antithrombogenicity of Artificial Surfaces through Heparin Coating - Clinical experience with the pneumatic extracorporeal Berlin Heart Assist Device.
Cardiovascular engineering **1996**, 1(1): 40-44.
- 311) Hetzer R, Loebe M, Potapov EV, Weng Y, Stiller B, Hennig E, Alexi-Meskishvili V, Lange PE. Circulatory support with pneumatic paracorporeal ventricular assist device in infants and children.
Ann Thorac Surg **1998**, 66(5): 1498-1506.
- 312) Pavie A, Leger P, Nzomvuama A, Szefer J, Regan M, Vaissier E, Gandjbakhch I. Left centrifugal pump cardiac assist with transeptal percutaneous left atrial cannula.
Artif Organs **1998**, 22(6): 502-507.
- 313) Koster A, Sanger S, Hansen R, Sodian R, Mertzlufft F, Harke C, Kuppe H, Hetzer R, Loebe M. Prevalence and persistence of heparin/platelet factor 4 antibodies in patients with heparin coated and noncoated ventricular assist devices.
ASAIO J **2000**, 46(3): 319-322.
- 314) Drews T, Loebe M, Hennig E, Kaufmann F, Muller J, Hetzer R. The 'Berlin Heart' assist device.
Perfusion **2000**, 15(4): 387-396.

- 315) Koster A, Loebe M, Sodian R, Potapov EV, Hansen R, Muller J, Mertzlufft F, Crystal GJ, Kuppe H, Hetzer R. Heparin antibodies and thromboembolism in heparin-coated and noncoated ventricular assist devices.
J Thorac Cardiovasc Surg **2001**, 121(2): 331-335.
- 316) Bonaros NE. Carmeda biocative surface minimizes platelet activation after implantation of the Micromed debakey VAD.
ASAIO **2003**, 49(2): 154-154.
- 317) Goldstein DJ. Worldwide experience with the MicroMed DeBakey Ventricular Assist Device as a bridge to transplantation.
Circulation **2003**, 108(10 Suppl 1): 272-277.
- 318) Merkle F, Boettcher W, Stiller B, Hetzer R. Pulsatile mechanical cardiac assistance in pediatric patients with the Berlin heart ventricular assist device.
J Extra Corpor Technol **2003**, 35(2): 115-120.
- 319) Kucukaksu DS, Sener E, Undar A, Noon GP, Tasdemir O. First Turkish experience with the MicroMed DeBakey VAD.
Tex Heart Inst J **2003**, 30(2): 114-120.
- 320) Stiller B, Hetzer R, Weng Y, Hummel M, Hennig E, Nagdyman N, Ewert P, Lehmkuhl H, Lange PE. Heart transplantation in children after mechanical circulatory support with pulsatile pneumatic assist device.
J Heart Lung Transplant **2003**, 22(11): 1201-1208.
- 321) Hetzer R, Potapov EV, Weng Y, Sinawski H, Knollmann F, Komoda T, Hennig E, Pasic M. Implantation of MicroMed DeBakey VAD through left thoracotomy after previous median sternotomy operations.
Ann Thorac Surg **2004**, 77(1): 347-350.
- 322) Dewald O, Schmitz C, Diem H, Goehring P, Vetter HO, Roell W, Goedje O, Tschoepe D, Reichart B. Platelet activation markers in patients with heart assist device.
Artif Organs **2005**, 29(4): 292-299.
- 323) Thoennissen NH, Schneider M, Allroggen A, Ritter M, Dittrich R, Schmid C, Scheld HH, Ringelstein EB, Nabavi DG. High level of cerebral microembolization in patients supported with the DeBakey left ventricular assist device.
J Thorac Cardiovasc Surg **2005**, 130(4): 1159-1166.
- 324) Stiller B, Weng Y, Hubler M, Lemmer J, Nagdyman N, Redlin M, Lange PE, Hetzer R. Pneumatic pulsatile ventricular assist devices in children under 1 year of age.
Eur J Cardiothorac Surg **2005**, 28(2): 234-239.
- 325) Eghtesady P, Nelson D, Schwartz SM, Wheeler D, Pearl JM, Cripe LH, Manning PB. Heparin-Induced Thrombocytopenia Complicating Support by the Berlin Heart.
ASAIO J **2005**, 51(6): 820-825.
- 326) Hetzer R, Alexi-Meskishvili V, Weng Y, Hubler M, Potapov E, Drews T, Hennig E, Kaufmann F, Stiller B. Mechanical cardiac support in the young with the Berlin Heart EXCOR pulsatile ventricular assist device: 15 years' experience.
Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu JT **2006**, 99-108.

- 327) Hetzer R, Potapov EV, Stiller B, Weng Y, Hubler M, Lemmer J, Alexi-Meskishvili V, Redlin M, Merkle F, Kaufmann F, Hennig E. Improvement in survival after mechanical circulatory support with pneumatic pulsatile ventricular assist devices in pediatric patients.
Ann Thorac Surg JT **2006**, 82(3): 917-924, discussion 924-925.
- 328) Potapov EV, Hetzer R. Pediatric Berlin heart EXCOR.
Ann Thorac Cardiovasc Surg JT **2006**, 12(2): 155.
- 329) Riesenfeld J, Ries D, Hetzer R. Analysis of the heparin coating of an EXCOR Ventricular Assist Device after 855 days in a patient.
Society for Biomaterials Transactions of the 32rd annual meeting **2007**.
- 330) Gandhi SK, Huddleston CB, Balzer DT, Epstein DJ, Boschert TA, Canter CE. Biventricular assist devices as a bridge to heart transplantation in small children.
Circulation **2008**, 118(14 Suppl): S89-93.
- 331) Krokstrom AK, Higgins T, Johansson S, Jogi P. Use of pediatric Berlin Heart EXCOR biventricular device as a bridge to retransplantation in a 10-month-old infant with acute graft failure after cardiac transplantation.
ASAIO J **2009**, 55(5): 525-526.
- 332) Januszewska K, Malec E, Birnbaum J, Loeff M, Sodian R, Schmitz C, Netz H, Reichart B. Ventricular assist device as a bridge to heart transplantation in children.
Interact Cardiovasc Thorac Surg **2009**, Nov: 807-810.
- 333) Tjan TD, Hoffmeier A, Scheld HH, Klotz S. Ventricular assist device implantation in neonates: adjustment of the BerlinHeart EXCOR arterial cannula with bovine pericardium.
J Thorac Cardiovasc Surg **2010**, 139(3): 783-784.
- 334) Brancaccio G, Amodeo A, Ricci Z, Morelli S. Mechanical assist device as a bridge to heart transplantation in children less than 10 kilograms.
Ann Thorac Surg **2010**, 90(1): 58-62.
- 335) Morales DL, Almond CS, Jaquiss RD, Rosenthal DN. Bridging children of all sizes to cardiac transplantation: The initial multicenter North American experience with the Berlin Heart EXCOR ventricular assist device.
J Heart Lung Transplant **2011**, 30(1): 1-8.
- 336) Hetzer R, Potapov EV, Alexi-Meskishvili V, Weng Y, Miera O, Berger F, Hennig E, Hubler M. Single-center experience with treatment of cardiogenic shock in children by pediatric ventricular assist devices.
J Thorac Cardiovasc Surg **2011**, 141(3): 616-623.e1.
- 337) Almond CS, Buchholz H, Massicotte P, Ichord R, Rosenthal DN, Uzark K, Jaquiss RD, Kroschwitz R, Kepler MB, Lobbstaël A, Bellinger D, Blume ED, Fraser CD Jr, Bartlett RH, Thiagarajan R, Jenkins K. Berlin Heart EXCOR Pediatric ventricular assist device Investigational Device Exemption study: Study design and rationale.
Am Heart J **2011**, 162: 425-435.
- 338) Fraser CD Jr, Jaquiss RD, Rosenthal DN, Humpl T, Canter CE. Prospective trial of a pediatric ventricular assist device.
N Engl J Med **2012**, 367(6): 532-541.

- 339) Werkkala K, Jokinen JJ, Soininen L, Dellgren G, Hallhagen S, Sundberg F, Andersson J, Dahms LI, Jurrmann N, Ersel S. Clinical Durability of the CARMEDA® BioActive Surface in EXCOR® VAD Pumps. *ASAIO Journal* **2016**, 62(2): 139-142.
- 340) Morales DLS, Zafar F, Almond CS, Canter C, Fynn-Thompson F, Conway J, Adachi I, Lorts A. Berlin Heart EXCOR use in patients with congenital heart disease. *J Heart Lung Transplant* **2017**, 36(11): 1209-1216.
- 341) Di Molfetta A, Iacobelli R, Filippelli S, Grutter G, Perri G, Iodice F, Pasquini L, Guccione P, Amodeo A. Evolution of Biventricular Loading Condition in Pediatric LVAD Patient: A Prospective and Observational Study. *Artif Organs* **2017**, 42(4): 386-393.
- 342) Pawlak S, Przybylski R, Skalski J, Śliwka J, Kansy A, Grzybowski A, Wierzyk A, Białkowski J, Maruszewski B, Zembala M. First Polish analysis of the treatment of advanced heart failure in children with the use of BerlinHeart EXCOR mechanical circulatory support. *Kardiol Pol* **2018**, 76(1): 83-90.
- 343) Schmack B, Weymann A, Ruschitzka F, Autschbach R, Raake PW, Jurrmann N, Menon AK, Karck M, Wilhelm MJ, Ruhparwar A. Successful support of biventricular heart failure patients by new EXCOR® Adult pumps with bileaflet valves: a prospective study. *Clin Res Cardiol* **2018**, 107(5): 413-420.
- 344) Di Molfetta A, Iacobelli R, Filippelli S, Grutter G, Perri G, Iodice F, Pasquini L, Guccione P, Amodeo A. Evolution of Biventricular Loading Condition in Pediatric LVAD Patient: A Prospective and Observational Study. *Artif Organs* **2018**, 42(4): 386-393.
- 345) Maeda K, Almond C, Hollander SA, Rosenthal DN, Kaufman B, Gowen MM, Murray J, Shuttleworth P, Reinhartz O. Characteristics of deposits and pump exchange in the Berlin Heart EXCOR ventricular assist device: Experience with 67 cases. *Pediatr Transplant* **2018**, 22(4): e13181.
- 346) Miera O, Morales DLS, Thul J, Amodeo A, Menon AK, Humpl T. Improvement of survival in low-weight children on the Berlin Heart EXCOR ventricular assist device support. *Eur J Cardiothorac Surg* **2019**, 1;55(5): 913-919.
- 347) Kanaya T, Ueno T, Taira M, Kido T, Okuda N, Araki K, Watanabe T, Toda K, Kuratani T, Sawa Y. Impact of Long-Term Support with Berlin Heart EXCOR® in Pediatric Patients with Severe Heart Failure. *Pediatr Cardiol* **2019**, 40(6): 1126-1133.
- 348) Bhatia I, Ho KC, Rocha BA, Yam N, Lun KS, Yung TC, Au WT. Pediatric ventricular assist device therapy for advanced heart failure-Hong Kong experience. *J Artif Organs* **2020**, 23(2): 133-139.
- 349) Potapov EV, Kaufmann F, Muller M, Mulzer J, Falk V. Longest Ongoing Support (13 Years) with Magnetically Levitated Left Ventricular Assist Device. *ASAIO J* **2020**, 66(9): e121-e122.

- 350) Rohde S, Antonides CFJ, Muslem R, de Woestijne PCV, der Meulen MHV, Kraemer US, Dalinghaus M, Bogers AJJC. Pediatric Ventricular Assist Device Support in the Netherlands.
World J Pediatr Congenit Heart Surg **2020**, 11(3): 275-283.
- 351) Maeda K, Nasirov T, Yarlagadda V, Hollander SA, Navaratnam M, Rosenthal DN, Dykes JC, Kaufman BD, Almond CS, Reinhartz O, Murray J, Chen S. Single Ventricular Assist Device Support for the Failing Bi-directional Glenn Patient.
Ann Thorac Surg **2020**, 110(5): 1659-1666.
- 352) Lorts A, Zafar F, VanderPluym C, Lantz J, Bleiweis M, Maeda K, Simpson K, Ploutz M, Jeewa A, Morales DL, Rosenthal D. Contemporary Berlin Heart EXCOR Outcomes in North America: Report from the ACTION Registry.
J Heart Lung Transplant **2020**; 39(4S): S131.
- 353) Fouilloux V, El Louali F, Gran C, Henaine R, Roubertie F, Chenu C, Fiorini M, Le Bel S, Mauriat P, Neidecker J, Mace L, Kreitmann B, Ovaert C. Berlin Heart EXCOR Paediatric Ventricular Assist Device: Does Weight Matter?
Heart Lung Circ **2020**, 30(4): 585-591.
- 354) Bartfay SE, Dellgren G, Hallhagen S, Wahlander H, Dahlberg P, Redfors B, Ekelund J, Karason K. Durable circulatory support with a paracorporeal device as an option for pediatric and adult heart failure patients.
J Thorac Cardiovasc Surg **2021**, 161(4): 1453-1464.e4.
- 355) Davis LM, Lee MGY, Sheridan BJ, d'Udekem Y, Brizard CP, Konstantinov IE, Mathew J, Brink J. Berlin Heart EXCOR Support in the First Year of Life: A Single Centre Experience.
Heart Lung Circ **2021**, 30(3): 446-453.
- 356) Romlin B, Dahlin A, Hallhagen S, Björk K, Wåhlander H, Söderlund F. Clinical course and outcome after treatment with ventricular assist devices in paediatric patients: A single-centre experience.
Acta Anaesthesiol Scand **2021**, 65(6): 785-791.
- 357) Zafar F, Conway J, Bleiweis MS, Al-Aklabi M, et. al. Berlin Heart EXCOR and ACTION post-approval surveillance study report.
J Heart Lung Transplant **2021**, 40(4): 251-259.
- 358) Philip J, Powers E, Machado D, Colon DL, Gupta D, Shih R, Ebraheem M, Fudge C, Bleiweis M. Pulsatile ventricular assist device as a bridge to transplant for the early high-risk single-ventricle physiology.
J Thorac Cardiovasc Surg **2020**, 162(2): 405-413.e4.
- 359) Lanmueller P, Eulert-Grehn JJ, Schoenrath F, Pieske B, Mulzer J, Mueller M, Falk V, Potapov E. Durable mechanical circulatory support in patients with heart failure with preserved ejection fraction.
Interact Cardiovasc Thorac Surg **2021**, 33(4): 628-630.
- 360) Bleiweis MS, Philip J, Peek GJ, Fudge JC, Sullivan KJ, Co-Vu J, Gupta D, Fricker FJ, Vyas HV, Ebraheem M, Powers ER, Falasa M, Jacobs JP. Combined Hybrid Procedure and VAD insertion in 9 High-Risk Neonates and Infants with HLHS.
Ann Thorac Surg **2021**, 114(3): 809-816.

- 361) Michel S, Buchholz S, Buech J, Veit T, Fabry T. Bridging patients in cardiogenic shock with a paracorporeal pulsatile biventricular assist device to heart transplantation-a single-centre experience.
Eur J Cardiothorac Surg **2022**; 61(4): 942-949.
- 362) Komori M, Hoashi T, Sakaguchi H, Imai K, Okuda N, et., al. Short-term outcomes of EXCOR Paediatric implantation.
Interact Cardiovasc Thorac Surg **2022**, 35(1): ivac 051.
- 363) Kremer J, El-Dor A, Sommer W, Tochtermann U, Warnecke G, Karck M, Ruhparwar A, Meyer AL. Long-term Paracorporeal Pulsatile Mechanical Circulatory Support in Adolescent and Adult Patients.
Interact Cardiovasc Thorac Surg **2022**, 35(3): ivac107.
- 364) Tominaga Y, Taira M, Watanabe T, Kugo Y, Hasegawa M, Narita J, Ishida H, Sakaniwa R, Ueno T, Miyagawa S. Cardiomyocyte deoxyribonucleic acid damage and cardiac recovery in paediatric dilated cardiomyopathy.
Eur J Cardiothorac Surg **2023**, 63(5): ezad064.
- 365) Owens A B. Pediatric Nursing Care of the Critically Ill Patient with Univentricular Physiology Stabilized with the Berlin Heart EXCOR.
AACN Adv Crit Care **2023**, 34(4): 370-376.
- 366) Bleiweis M S, Philip J, Stukov Y, Peek G J, Janelle G M, Pitkin A D, Sullivan K J, Fudge J C, Vyas H V, Hernandez-Rivera J F, Neal D, Sharaf O M, Jacobs J P. Outcomes of Children Supported with Pulsatile Paracorporeal Ventricular Assist Device: Congenital Versus Acquired Heart Disease.
World J Pediatr Congenit Hear Surg **2023**, 14(6): 708-715.
- 367) Rohde S, By T M M H de, Bogers A J J C, Schweiger M. Myocardial Recovery in Children Supported with a Durable Ventricular Assist Device - a Systematic Review.
Eur J Cardio-Thorac Surg **2023**, 64(2): ezad263.
- 368) Mikulski M F, Iyer S, Well A, Mery C M, Owens W R, Glass L D, Castleberry C D, Fraser C D. Successful Explantation of Children from the Berlin Heart EXCOR® Ventricular Assist Device: A Systematic Review.
Artif Organs **2024**, 48(5): 444-455.
- 369) Bleiweis M S, Sharaf O M, Philip J, Peek G J, Stukov Y, Janelle G M, Pitkin A D, Sullivan K J, Nixon C S, Neal D, Jacobs J P. A Single-Institutional Experience with 36 Children Less than 5 Kilograms Supported with the Berlin Heart: Comparison of Congenital versus Acquired Heart Disease.
Cardiol Young **2024**, Feb 16. Epub ahead of print.

Case Reports

- 370) Perrier S, Parker A, Brizard CP, Sheridan B, Konstantinov IE, d'Udekem Y, Brink J. Surgical Management of Extensive Perinatal Myocardial Infarction.
Ann Thorac Surg **2017**, 104(6): e435-e437.
- 371) Kohli U, Pumphrey KL, Ahmed A, Das S. Pre-excitation induced ventricular dysfunction and successful berlin heart explantation after accessory pathway ablation.
J Electrocardiol **2018**, 51(6): 1067-1070.
- 372) Ziegler LA, Sainathan S, Morell VO, Sharma MS. Total Artificial Heart as Rescue Therapy for Primary Graft Failure in an Infant.
Ann Thorac Surg. **2018** April 105(4): e151-e153.

- 373) Herrmann FEM, Schramm R, Hagl C, Eifert S, Pichlmaier M. Aortic Root Replacement and Berlin Heart EXCOR Implantation in Marfan Syndrome. *Ann Thorac Surg* **2019**, 107(3): e187-e189.
- 374) Gravino R, Limongelli G, Petraio A, Masarone D, Russo MG, Maiello C, Verrengia M, De Paulis D, Pacileo G. Berlin Heart EXCOR® pediatric ventricular assist device in a patient with Sotos syndrome: a case report. *J Med Case Rep* **2019**, 13(1): 286.
- 375) Araki K, Ueno T, Taira M, Kanaya T, Watanabe T, Tominaga Y, Ishii R, Ishida H, Narita J, Toda K, Kuratani T, Sawa Y. Pediatric patient with restrictive cardiomyopathy on staged biventricular assist device support with Berlin Heart EXCOR® underwent heart transplantation successfully: the first case in Japan. *J Artif Organs* **2021**, 24(2): 269-272.
- 376) Schwendt M, Kroll J, Fleck T, Stiller B. A Rare Case of Severe Dilated Cardiomyopathy in Early Infancy. *Thorac Cardiovasc Surg Rep* **2021**, 10(1): e12-e14.
- 377) Wilkinson D, Lin Y, Everett M, Auerbach S, Morgan G, Mitchell MB. Coronary Artery Reimplantation and Berlin Heart EXCOR Rescue for Left Coronary Artery Atresia with Severe Ischemic Cardiomyopathy. *World J Pediatr Congenit Heart Surg* **2021**, 12(6): 793-795.
- 378) Ponzoni M, Frigo AC, Castaldi B, Cerutti A, Di Salvo G, Vida VL, Padalino MA. Surgical strategies for management of end-stage heart failure in infants and children: a 15-year experience with a patient-tailored approach. *Artif Organs* **2021**, 45(12): 1543-1553.
- 379) Rohde S, Sandica E, Veen K, Kraemer US, Thiruchelvam T, Miera O, Lopez MLP, Sliwka J, Amodeo A, Bogers AJJC, de By TMMH. Outcomes in small children on Berlin Heart EXCOR support - Age and BSA as clinical predictive factors. *Eur J Cardiothorac Surg* **2022**, 63(1): ezac516.
- 380) Karner B, Urganci E, Schlein J, Base E, Greil S, Michel-Behnke I, Granegger M, Laufer G, Zimpfer D. First-in-man use of the EXCOR Venous Cannula for combined cavopulmonary and systemic ventricular support in Fontan circulation failure. *J Heart Lung Transplant* **2022**, 41(10): 1533-1536.
- 381) Magnetta DA, Reichhold A, Thrush PT, Monge M, Webster G, Joong A. Biventricular Assist Device Support for Intractable Arrhythmias from Histiocytoid Cardiomyopathy. *ASAIO J* **2022**, 68(11): e207-e210.
- 382) Hasegawa M, Tominaga Y, Watanabe T, Ueno T, Taira M, Miyagawa S. Successful bridge to transplantation with long-term support using Berlin heart EXCOR in a child with failing Fontan. *Gen Thorac Cardiovasc Surg* **2022**, 70(8): 750-753.
- 383) Hulman M, Artemiou P, Hudec V, Olejarova I, Goncalvesova E, Gasparovic I. Successful support of biventricular heart failure in an adult patient by the Berlin Heart EXCOR system as a bridge to transplant: literature review. *Bratisl Lek Listy* **2023**, 124(4): 309-312.
- 384) Torpoco Rivera DM, Schneider J, Lawrence D, Dentel J, Sehgal S. Successful Explantation of Berlin Heart Excor in Two Young Children. *ASAIO J* **2023**, 69(2): e100-e105.

- 385) Nagase H, Hoashi T, Toda K, Hotoda K, Fuchigami Y, Iijima Y, Suzuki T. Mechanical Support for Bridge to Transplant in an Infant with Post-Cardiotomy End-Stage Heart Failure and Complete Heart Block: Report of a Case.
J Artif Organs **2023**, Dec 29. Epub ahead of print.
- 386) Castillo J J D del, Cejas C M M, Guzmán E G, Pérez M A F. Bridge to Transplant in Single-Ventricle Anatomy: Subpulmonary Support with EXCOR® Ventricular Assist Device Associated with Pulmonary Artery Reconstruction.
Eur J Cardio-Thorac Surg **2024**, Apr 24. Epub ahead of print.

Clinical

Peripheral Vascular Surgery

- 387) Mayer B, Kretschmer R, Gunzenhauser E. Interposition connectors with heparin coating for vascular anastomosis of microsurgical tissue flaps.
Laryngorhinootologie **1992**, 71(7): 359-361.
- 388) Peeters P, Bosiers M, Verbist J, Deloose K. Addressing Early graft failure: Midterm results with the Gore-Tex propaten Vascular Graft.
J Endovasc Ther **2004**, 11(supplement): 31-32.
- 389) Walluscheck KP, Bierkandt S, Brandt M, Cremer J. Infrainguinal ePTFE vascular graft with bioactive surface heparin bonding. First clinical results.
J Cardiovasc Surg (Torino) **2005**, 46(4): 425-430.
- 390) Dorigo W. Lower limb below-knee revascularization with a new bioactive prosthetic graft. A case-control study.
J Vasc Endovasc Surg **2005**, (12): 75-81.
- 391) Bosiers M, Deloose K, Verbist J, Schroe H, Lauwers G, Lansink W, Peeters P. Heparin-bonded expanded polytetrafluoroethylene vascular graft for femoropopliteal and femorocrural bypass grafting: 1-year results.
J Vasc Surg **2006**, 43(2): 313-318.
- 392) Battaglia G, Tringale R, Monaca V. Retrospective comparison of a heparin bonded ePTFE graft and saphenous vein for infragenicular bypass: implications for standard treatment protocol.
J Cardiovasc Surg (Torino) JT **2006**, 47(1): 41-47.
- 393) Peeters P, Verbist J, Deloose K, Bosiers M. Results with heparin bonded polytetrafluoroethylene grafts for femorodistal bypasses.
J Cardiovasc Surg (Torino) **2006**, 47(4): 407-413.
- 394) Walluscheck KP. Heparin bonded expanded polytetrafluoroethylene vascular graft for occlusive vascular disease of the lower extremity.
The Italian Journal of Vascular and Endovascular Surgery **2006**, 13(3): 137-147.
- 395) Dorigo W, Di Carlo F, Troisi N, Pratesi G, Innocenti AA, Pulli R, Pratesi C. Lower limb revascularization with a new bioactive prosthetic graft: early and late results.
Ann Vasc Surg **2008**, 22(1): 79-87.
- 396) Heyligers JM, Lisman T, Verhagen HJ, Weeterings C, de Groot PG, Moll FL. A heparin-bonded vascular graft generates no systemic effect on markers of hemostasis activation or detectable heparin-induced thrombocytopenia-associated antibodies in humans.
J Vasc Surg **2008**, 47(2): 324-329.

- 397) Dorrucchi V, Griselli F, Petralia G, Spinamano L, Adornetto R. Heparin-bonded expanded polytetrafluoroethylene grafts for infragenicular bypass in patients with critical limb ischemia: 2-year results.
J Cardiovasc Surg (Torino) **2008**, 49(2): 145-149.
- 398) Peeters P, Verbist J, Deloose K, Bosiers M. Will heparin-bonded PTFE replace autologous venous conduits in infrapopliteal bypass?
J Vasc Endovasc Surg **2008**, 15: 143-148.
- 399) Thermann F, Wollert U. Proximalization of the arterial inflow: new treatment of choice in patients with advanced dialysis shunt-associated steal syndrome?
Ann Vasc Surg **2009**, 23(4): 485-490.
- 400) Daenens K, Schepers S, Fourneau I, Houthoofd S, Nevelsteen A. Heparin-bonded ePTFE grafts compared with vein grafts in femoropopliteal and femorocrural bypasses: 1- and 2-year results.
J Vasc Surg **2009**, 49(5): 1210-1216.
- 401) Hugl B, Nevelsteen A, Daenens K, Alonso Perez M, Heider P, Railo M, Schelzig H, Gluecklich B, Balzer K, Vermassen F, De Smit P, Fraedrich G. PEPE II - A multicenter study with an end-point heparin-bonded expanded polytetrafluoroethylene vascular graft for above and below knee bypass surgery: determinants of patency.
J Cardiovasc Surg (Torino) **2009**, 50(2): 195-203.
- 402) Neville R, Babrowicz J, Deaton DH. Surgical approaches to chronic limb ischemia.
Endovascular today **2009**, 8(5): 48-56.
- 403) Davidson I, Hackerman C, Kapadia A, Minhajuddin A. Heparin bonded hemodialysis e-PTFE grafts result in 20% clot free survival benefit.
J Vasc Access **2009**, 10(3): 153-156.
- 404) Pulli R, Dorigo W, Castelli P, Dorrucchi V. Midterm results from a multicenter registry on the treatment of infrainguinal critical limb ischemia using a heparin-bonded ePTFE graft.
J Vasc Surg **2010**, 51(5): 1167-1177.e1.
- 405) Thermann F, Wollert U, Ukkat J, Dralle H. Proximalization of the arterial inflow (PAI) in patients with dialysis access-induced ischemic syndrome: First report on long-term clinical results.
J Vasc Access **2010**, 11(2): 143-149.
- 406) Kasirajan K. Outcomes Following Heparin-Induced Thrombocytopenia in Patients with Heparin Bonded Vascular Grafts.
Journal of Vascular Surgery Abstracts of the 2011 Vascular Annual Meeting **2011**, 53: 17S-8S.
- 407) Gabrielli R, Siani A, Rosati MS, Antonelli R, Accrocca F, Giordano GA, Marcucci G. Heparin-induced thrombocytopenia type II because of heparin-coated polytetrafluoroethylene graft used to bypass.
Ann Vasc Surg **2011**, 25: 840.
- 408) Dorigo W, Pulli R, Castelli P, Dorrucchi V, Ferilli F, De Blasis G, Monaca V, Vecchiati E, Pratesi C, Propaten Italian Registry Group. A multicenter comparison between autologous saphenous vein and heparin-bonded expanded polytetrafluoroethylene (ePTFE) graft in the treatment of critical limb ischemia in diabetics.
J Vasc Surg **2011**, 54(5): 1332-1338.

- 409) Chan MG, Miller FJ, Valji K, Kuo MD. Evaluation of expanded polytetrafluoroethylene-covered stents for the treatment of venous outflow stenosis in hemodialysis access grafts.
J Vasc Interv Radiol **2011**, 22: 647-53.
- 410) Kirkwood ML, Wang GJ, Jackson BM, Golden MA, Fairman RM, Woo EY. Lower limb revascularization for PAD using a heparin-coated PTFE conduit.
Vasc Endovascular Surg **2011**, 45(4): 329-334.
- 411) Lindholt JS, Gottschalksen B, Johannesen N, Dueholm D, Ravn H, Christensen ED, Viddal B, Flørenes T, Pedersen G, Rasmussen M, Carstensen M, Grøndal N, Fasting H. The Scandinavian Propaten trial - 1-year patency of PTFE vascular prostheses with heparin-bonded luminal surfaces compared to ordinary pure PTFE vascular prostheses - a randomised clinical controlled multi-centre trial.
Eur J Vasc Endovasc Surg **2011**, 41(5): 668-673.
- 412) Charlton-Ouw KM, Nosrati N, Miller CC, Coogan SM, Safi HJ, Azizzadeh A. Outcomes of arteriovenous fistulae compared with heparin-bonded and conventional grafts for hemodialysis access.
J Vasc Access **2012**, 13: 163-167.
- 413) Tatterton M, Wilshaw SP, Ingham E, Homer-Vanniasinkam S. The use of antithrombotic therapies in reducing synthetic small-diameter vascular graft thrombosis.
Vasc Endovascular Surg **2012**, 46(3): 212-22.
- 414) Kasirajan K. Outcomes after heparin-induced thrombocytopenia in patients with Propaten vascular grafts.
Ann Vasc Surg **2012**, 26(6): 802-808.
- 415) Dorigo W, Pulli R, Piffaretti G, Castelli P, Griselli F. Results from an Italian multicentric registry comparing heparin-bonded ePTFE graft and autologous saphenous vein in below-knee femoro-popliteal bypasses.
J Cardiovasc Surg (Torino) **2012**, 53(2): 187-194.
- 416) Neville RF, Capone A, Amdur R. A comparison of tibial artery bypass performed with heparin-bonded expanded polytetrafluoroethylene and great saphenous vein to treat critical limb ischemia.
J Vasc Surg, **2012**, 56(4): 1008-1014.
- 417) Bellosta R, Natalini G, Luzzani L. Comparison of precuffed expanded polytetrafluoroethylene and heparin-bonded polytetrafluoroethylene graft in crural bypass.
Ann Vasc Surg **2013**, 27(2): 218-224.
- 418) Monaca V, Battaglia G, Turiano SA, Tringale R, Catalfamo S, Vittorio E. Subpopliteal revascularization. Criteria analysis for the use of E-PTFE (Propaten®) as first choice conduit.
Italian Journal of Vascular and Endovascular Surgery **2013**, 20(3): 165-169.
- 419) Allemang MT, Schmotzer B, Wong VL. Heparin bonding does not improve patency of polytetrafluoroethylene arteriovenous grafts.
Ann Vasc Surg, **2014**, 28(1): 28-34.
- 420) Tozzi, M, Franchin M, Ietto G, Soldini G, Carcano G, Castelli P, Piffaretti G. Initial Experience with the Gore Acuseal Graft for Prosthetic Vascular Access.
J Vasc Access **2014**, 15(5): 385-390.

- 421) Pulli R, Dorigo W, Piffaretti G, Castelli P, Griselli F, Dorrucchi V, Ferilli F, Ottavi P, De Blasis G, Scalisi L, Monaca V, Battaglia G, Vecchiati E, Casal G, Pratesi C. A decade of arterial bypass results with the Gore® Propaten® Vascular Graft: Long-term clinical results from more than 1000 cases in the multicenter Italian Registry.
Italian Journal of Vascular and Endovascular Surgery **2014**, 21(3): 101-107.
- 422) Bechara CF. Comparing short and midterm infrainguinal bypass patency rates between two ePTFE prosthetic grafts: Spiral laminar flow and propaten.
Vascular Disease Management **2014**, 11(3): E54-E58.
- 423) Neville R, Babrowicz J, Amdur R, Sidawy A. Heparin-bonded ePTFE (propaten): Is it as good as autologous vein for tibial bypass?
Italian Journal of Vascular and Endovascular Surgery **2014**, 21(1): 49-56.
- 424) Glickman M. GORE® ACUSEAL Vascular Graft and early cannulation.
Endovascular Today **2014**, 13(6) Supplement: 7-8: 30.
- 425) Aitken EL, Jackson AJ, Kingsmore DB. Early cannulation prosthetic graft (Acuseal™) for arteriovenous access: A useful option to provide a personal vascular access solution.
Journal of Vascular Access **2014**, 15(6): 481-485.
- 426) Quilici BS, Ricardo AS, Vinicius B, Cavaquini TJ, Slavo LFM, Sincos IR, Ricardo A. Alternative grafts for brachioaxillary hemodialysis access: 1-year comparative results.
Jornal Vascular Brasileiro **2015**, 14(2): 133-138.
- 427) Avgerinos ED, Sachdev U, Naddaf A, Doucet DR, Mohapatra A, Leers SA, Chaer RA, Makaroun MS. Autologous Alternative Veins May Not Provide Better Outcomes than Prosthetic Conduits for below-Knee Bypass When Great Saphenous Vein Is Unavailable.
J Vasc Surg **2015**, 62(2): 385-391.
- 428) Gessaroli M, Tarantini S, Leone M, Fabbri E, Panzini I. A Comparison of Femorocrural Bypasses Performed with Modified Heparin-Bonded Expanded Polytetrafluorethylene Grafts and Those with Great Saphenous Vein Grafts to Treat Critical Limb Ischemia.
Ann Vasc Surg **2015**, 29(6): 1255-1264.
- 429) Glickman MH, Burgess J, Cull D, Roy-Chaudhury P, Schanzer H. Prospective Multicenter Study with a 1-Year Analysis of a New Vascular Graft Used for Early Cannulation in Patients Undergoing Hemodialysis.
J Vasc Surg **2015**, 62(2): 434-441.
- 430) Maytham GGD, Sran HK, Chemla ES. The Use of the Early Cannulation Prosthetic Graft (Acuseal™) for Angioaccess for Haemodialysis.
J Vasc Access **2015**, 16(6): 467-471.
- 431) Shemesh D, Goldin I, Hijazi J, Zaghal I, Berelowitz D, Verstandig A, Olsha O. A Prospective Randomized Study of Heparin-Bonded Graft (Propaten) versus Standard Graft in Prosthetic Arteriovenous Access.
J Vasc Surg **2015**, 62(1): 115-122.
- 432) Uhl C, Hock C, Betz T, Greindl M. Comparison of Venous and HePTFE Tibial and Peroneal Bypasses in Critical Limb Ischemia Patients Unsuitable for Endovascular Revascularization.
Vascular **2015**, 23(6): 607-163.

- 433) Tsilimparis N, Larena-Avellaneda A, Krause B, Wipper S, Diener H, Kölbel T, Debus ES. Results of the Gore Hybrid Vascular Graft in Challenging Aortic Branch Revascularization during Complex Aneurysm Repair. *Ann Vasc Surg* **2015**, 29(7): 1426-1433.
- 434) Battaglia G, Turiano SA, Tringale R, Sabatino E, Monaca V. Below knee revascularization in the severe ischemic lower extremity: A comparison of long-term outcome of peroneal and tibial bypass. *Italian Journal of Vascular and Endovascular Surgery* **2015**, 22(4): 181-188.
- 435) Anaya-Ayala JE, Davies MG, El-Sayed HF, Peden EK, Naoum JJ. Early experience with a novel hybrid vascular graft for hemodialysis access creation in patients with disadvantaged anatomy. *Journal of Endovascular Therapy* **2015**, 22(5): 778-785.
- 436) Lindholt JS, Houliind K, Gottschalksen B, Pedersen CN, Ravn H, Viddal B, Pedersen G, Rasmussen M, Wedel C, Bramsen MB. Five-year outcomes following a randomized trial of femorofemoral and femoropopliteal bypass grafting with heparin-bonded or standard polytetrafluoroethylene grafts. *Br J Surg* **2016**, 103(10): 1300-1305.
- 437) Samson RH, Morales R, Showalter DP, Lepore MR Jr, Nair DG. Heparin-bonded expanded polytetrafluoroethylene femoropopliteal bypass grafts outperform expanded polytetrafluoroethylene grafts without heparin in a long-term comparison. *J Vasc Surg* **2016**, 64(3): 638-647.
- 438) Pulli R, Dorigo W, Piffar Etti G, Castelli P, Griselli F, Dorrucchi V, Ferilli F, Otta Vi P, De Blasis G, Scalsi L, Monaca V, Battaglia G, Vecchiati E, Casali G, Prat Esi C. A multicentric registry-based score for identifying patients with critical limb ischemia who might benefit from the use of a heparin-bonded ePTFE graft. *Italian Journal of Vascular and Endovascular Surgery* **2016**, 23(4): 173-180.
- 439) Thorat A, Jeng LB, Yang HR, Li PC, Li ML, Yeh CC, Chen TH, Hsu SC, Poon KS. Outflow reconstruction for right liver allograft with multiple hepatic veins: "V-plasty" of hepatic veins to form a common outflow channel versus 2 or more hepatic vein-to-inferior vena cava anastomoses in limited retrohepatic space. *Liver Transpl* **2016**, 22(2): 192-200.
- 440) Davies MG, Anaya-Ayala JE, El-Sayed HF. Equivalent outcomes with standard and heparin-bonded expanded polytetrafluoroethylene grafts used as conduits for hemodialysis access. *J Vasc Surg* **2016**, 64(3): 715-718.
- 441) Zea N, Menard G, Le L, Luo Q, Bazan HA, Sternbergh WC, Smith TA. Heparin-bonded polytetrafluorethylene does not improve hemodialysis arteriovenous graft function. *Annals of Vascular Surgery* **2016**, 30: 28-33.
- 442) Hock C, Betz T, Töpel I, Bröckner S, Steinbauer M, Uhl C. A Comparison of Tibial and Peroneal Venous and HePTFE Bypasses in Diabetics with Critical Limb Ischemia. *Surgeon* **2017**, 15(2): 69-75.
- 443) Benedetto F, Spinelli D, Pipito N, Gagliardo G, Noto A, Villari S, David A, Spinelli F. Initial clinical experience with a polytetrafluoroethylene vascular dialysis graft reinforced with nitinol at the venous end. *J Vasc Surg* **2017**, 65(1): 142-150.

- 444) Kaiser J, Chen A, Cheung M, Kfoury E, Bechara CF, Lin PH. Comparison of propaten heparin-bonded vascular graft with distal anastomotic patch versus autogenous saphenous vein graft in tibial artery bypass.
Vascular **2018**, 26(2): 117-125.
- 445) Piffaretti G, Dorigo W, Castelli P, Pratesi C, Pulli R; PROPATEN Italian Registry Group. Results from a multicenter registry of heparin-bonded expanded polytetrafluoroethylene graft for above-the-knee femoropopliteal bypass.
J Vasc Surg **2017**, 67(5): 1463-1471.
- 446) Reijnen MMPJ, van Walraven LA, Fritschy WM, Lensvelt MMA, Zeebregts CJ, Lemson MS, Wikkeling ORM, Smeets L, Holewijn S. 1-Year Results of a Multicenter Randomized Controlled Trial Comparing Heparin-Bonded Endoluminal to Femoropopliteal Bypass.
JACC Cardiovasc Interventions **2017**, 10(22): 2320-2331.
- 447) Dorigo W, Piffaretti G, Pulli R, PROPATEN Italian Registry Group, Castelli P, Pratesi C. A Multicenter Predictive Score for Amputation-Free Survival for Patients Operated on with a Heparin-Bonded ePTFE Graft for Critical Limb Ischemia.
World J Surg **2017**, 41(1): 306-313.
- 448) Perry JW, Hardy D, Agarwal S, Agarwal G. Safety and efficacy of a modified HeRO dialysis device in achieving early graft cannulation: A single-institution experience.
J Vasc Surg Cases Innov Tech **2017**, 3(3): 175-179.
- 449) Uhl C, Grosch C, Hock C, Topel I, Steinbauer M. Comparison of Long-term Outcomes of Heparin Bonded Polytetrafluoroethylene and Autologous Vein Below Knee Femoropopliteal Bypasses in Patients with Critical Limb Ischaemia.
Eur J Vasc Endovasc Surg **2017**, 54(2): 203-211.
- 450) Vergnaud S, Riche V, Tessier P, Mauduit N, Kaladji A, Goueffic Y. Budget impact analysis of heparin-bonded polytetrafluoroethylene grafts (Propaten) against standard polytetrafluoroethylene grafts for below-the-knee bypass in patients with critical limb ischaemia in France.
BMJ open **2018**, 8(2): e017320.
- 451) Fernandez Prendes C, Padron Encalada C, Zanabali Al-Sibbai AA, Del Castro Madrazo JA, Cambor Santervas LA, Alonso Perez M. The use of the Gore® Hybrid Vascular Graft for treatment of complex Iliofemoral revascularization procedures.
Vasc Endovascular Surg **2018**, 52(3): 222-225.
- 452) Wagner JK, Truong S, Chaer R, Dillavou E, Hager E, Yuo T, Makaroun M, Avgerinos ED. Current Experience and Midterm Follow-up of Immediate-Access Arteriovenous Grafts.
Ann Vasc Surg **2018**, 53:123-127.
- 453) Villemoes MK, Lindholt JS, Houliind KC, Gottschalksen B, Petersen CN, Rasmussen M, Wedel C, Bramsen MB, Søgaard R. Cost-Effectiveness Evaluation of Heparin Coated Versus Standard Graft for Bypass Surgery in Peripheral Artery Disease Alongside a Randomised Controlled Trial.
Eur J Vasc Endovasc Surg. **2018**, 56(1): 87-93.

- 454) Piffaretti G, Dorigo W, Castelli P, Pratesi C, Pulli R, Innocenti AA, Giacomelli E, Fargion A, De Blasis G, Scalisi L, Monaca V, Battaglia G, Dorrucchi V, Vecchiati E, Casali G, Ferilli F, Ottavi P, Micheli R, PROPATEN Italian Registry Group. Results from a multicenter registry of heparin-bonded expanded polytetrafluoroethylene graft for above-the-knee femoropopliteal bypass.
J Vasc Surg **2018**, 67(5): 1463-1471.e1.
- 455) Veraldi GF, Mezzetto L, Macri M, Criscenti P, Corvasce A, Poli R. Comparison of Endovascular Versus Bypass Surgery in Femoropopliteal TASC II D Lesions: A Single-Center Study.
Ann Vasc Surg **2018**, 47: 179-187.
- 456) Wagner JK, Dillavou E, Nag U, Ali AA, Truong S, Chaer R, Hager E, Yuo T, Makaroun M, Avgerinos ED. Immediate-access grafts provide comparable patency to standard grafts, with fewer reinterventions and catheter-related complications.
J Vasc Surg **2019**, 69(3): 883-889.
- 457) Habibollahi P, Mantell MP, Rosenberry T, Leeser DB, Clark TWI. Outcomes of a Polytetrafluoroethylene Hybrid Vascular Graft with Preloaded Nitinol Stent at the Venous Outflow for Dialysis Vascular Access.
Ann Vasc Surg **2019**, 55: 210-215.
- 458) Piffaretti G, Dorigo W, Ottavi P, Pulli R, Castelli P, Pratesi C. Results of infrainguinal revascularization with bypass surgery using a heparin-bonded graft for disabling intermittent claudication due to femoropopliteal occlusive disease.
Journal of Vascular Surgery **2019**, May 18, S0741-5214(18).
- 459) Desai SS. Two-Year Outcomes of Early Cannulation Arteriovenous Grafts for End-Stage Renal Disease.
Ann Vasc Surg **2019**, Aug, 59:158-166.
- 460) Piffaretti G, Dorigo W, Ottavi P, Pulli R, Bush RL, Castelli P, Pratesi C. Prevalence and risk factors for heparin-bonded expanded polytetrafluoroethylene vascular graft infection after infrainguinal femoropopliteal bypasses.
Journal of Vascular Surgery **2019**, 70(4): 1299-1307.
- 461) Colvard B, Georg Y, Lejay A, Ricco JB, Swanstrom L, Lee J, Bismuth J, Chakfe N, Thaveau F. Total robotic iliac aneurysm repair with preservation of the internal iliac artery using sutureless vascular anastomosis.
J Vasc Surg Cases Innov Tech **2019**, 5(3): 218-224.
- 462) Benedetto F, Spinelli D, Pipito N, Menegolo M, Tozzi M, Giubbolini M, Bracale UM, Frigerio D, Agostinucci A, Scolaro A, Alibrandi A, Pratesi C, Setacci C. Hybrid arteriovenous graft for hemodialysis vascular access in a multicenter registry.
J Vasc Surg **2019**, 70(6): 1904-1912.e2.
- 463) Nguyen-Lee JJ, Zubair MM, Chegireddy V, Yammine H, Bennett ME, Lumsden AB, Bechara CF, Bismuth J. Clinical Experience with Gore Hybrid Vascular Graft in Complex Revascularizations Demonstrates Safety and Efficacy.
Ann Vasc Surg **2020**, 66: 646-653.
- 464) MacKenzie DJ, Isaak A, Nash J, Meldrum AD, Stevenson K, Kasthuri R, Tan A, Kingsmore DB. Early Cannulation ePTFE Arteriovenous Access Grafts are Associated with a Low Incidence of Pseudoaneurysm Formation.
Ann Vasc Surg **2020**, Apr 64: 270-275.

- 465) Hirth-Voury A, Massiot N, Giauffret E, Behets C, Duprey A, Hassen-Khodja R, Jean-Baptiste E, Sadaghianloo N. Comparison of Cryopreserved Arterial Allografts Versus Heparin-bonded Vascular Grafts in Infragenicular Bypass for Chronic Limb Threatening Ischemia.
Ann Vasc Surg **2020** Apr 64: 33-42.
- 466) Shibutani S, Obara H, Matsubara K, Toya N, Isogai N, Ogino H, Watada S, Asami A, Kudo T, Kanaoka Y, Fujimura N, Harada H, Uchiyama H, Sato Y, Japanese Bypass Registry Group Tokyo Japan, Ohki T. Midterm Results of a Japanese Prospective Multicenter Registry of Heparin-Bonded Expanded Polytetrafluoroethylene Grafts for Above-the-Knee Femoropopliteal Bypass.
Circ J **2020**, 84(3): 501-508.
- 467) Samson RH. The appropriate diameter for prosthetic heparin-bonded polytetrafluoroethylene femoropopliteal bypass grafts remains controversial.
J Vasc Surg **2020**, 71(1): 350-351.
- 468) Levin SR, Farber A, Siracuse JJ. Preservation of Heparin-Bonded Prosthetic Graft for Hemodialysis in the Setting of Early Heparin-Induced Thrombocytopenia.
Ann Vasc Surg **2020**, 65: 282.e1-282.e3.
- 469) Sayed T, Montasser M, Ashoor Y, Saad A. Outcome of GORE® ACUSEAL graft for brachial-axillary vascular access in chronic haemodialysis patients: Cohort retrospective single-centre study.
Ann Med Surg **2020**, 60: 471-474.
- 470) Honma K, Eguchi D. Short- to midterm results of early cannulation arteriovenous grafts (Gore® ACUSEAL) for hemodialysis: Experience with the ACUSEAL in a Japanese cohort.
J Vasc Access **2020**, 23(1): 75-80.
- 471) Nissen AP, Sandhu HK, Perlick AP, Wong VL, Smith TA. Heparin-bonded versus standard polytetrafluoroethylene arteriovenous grafts: A Bayesian perspective on a randomized controlled trial for comparative effectiveness.
Surgery **2020**, 168(6): 1066-1074.
- 472) Yamamoto Y, Uchiyama H, Oonuki M. Use of heparin-bonded expanded polytetrafluoroethylene grafts for renal artery reconstruction.
Ann Vasc Surg **2021**, 74: 287-293.
- 473) Dorigo W, Fargion A, Bassoli G, Di Domenico R, Giacomelli E, Piffaretti G, Alessi Innocenti A, Pratesi C. Autologous saphenous vein and heparin-bonded expanded polytetrafluoroethylene as graft materials for below-the-knee femoro-popliteal bypass in patients with critical limb ischemia: A propensity score-matched analysis.
Surgeon **2021**, Mar 6. Epub ahead of print.
- 474) Baba T, Ohki T, Maeda K, Ito E, Momose M, Chono Y, Omori M, Shukuzawa K. Evaluation of heparin-bonded ePTFE grafts for forearm loop vascular access: Comparison between Gore® PROPATEN vascular graft and ACUSEAL vascular graft.
J Vasc Access **2021**, 23(3): 430-435.
- 475) Betz T, Toepel I, Pfister K, Lang M, Steinbauer M, Uhl C, Zeman F, Schierling W. Impact of chronic kidney disease on the outcomes of infrapopliteal venous, and heparin-bonded expanded polytetrafluoroethylene bypass surgeries: A retrospective cohort study.
Vasc Med **2021**, 27(1): 55-62.

- 476) Lauria AL, Propper BW, Neville RF. Surgical Deep Vein Arterialization: Adding to the Armamentarium of Complex Limb Salvage.
Ann Vasc Surg **2022**, 87: 198-204.
- 477) Neufang A, Zhghenti V, Vargas-Gomez C, Umscheid T, von Flotow P, Schmiedel R, Savvidis S. Long-Term Results of Femorodistal Sequential Composite-Bypass Combining Heparin-Bonded PTFE-Prosthesis and Autologous Vein Using the Deutsch Bridge Technique in Critical Limb-Threatening Ischemia.
J Clin Med **2023**, 12(8): 2895.
- 478) Gouëffic Y, Piffaretti G, Iqbal K, Dorweiler B, Hyhlik-Dürr A. A Systematic Review and Meta-Analysis of Heparin-Bonded Expanded Polytetrafluoroethylene Grafts for Below-The-Knee Femoral Bypass Surgery.
Ann Vasc Surg **2024**, Apr 4. Epub ahead of print.
- 479) Fujimura N, Obara H, Matsubara K, Toya N, Isogai N, Ogino H, Fujii T, Kudo T, Kanaoka Y, Harada H, Uchiyama H, Guntani A, Shimogawara T, Watada S, Shibutani S, Ohki T, Group on behalf of the J B R. Long-Term Outcomes of a Japanese Prospective Multicenter Registry Using a Heparin-Bonded Expanded Polytetrafluoroethylene Graft for Above-the-Knee Femoropopliteal Bypasses.
Circ J **2024**, Apr 12. Epub ahead of print.

Case Reports

- 480) Thakur S, Pigott JP, Comerota AJ. Heparin-induced thrombocytopenia after implantation of a heparin-bonded polytetrafluoroethylene lower extremity bypass graft: A case report and plan for management.
J Vasc Surg **2009**, 49(4): 1037-1040.
- 481) Afaneh C, Aronova A, Ross JR, Leeser DB. Use of hybrid vascular grafts in failing access for hemodialysis: report of two cases.
J Vasc Access **2012**, 13(4): 513-515.
- 482) Willaert W, Claes K, Flamme A, Jacobs B. Initial experience with a novel hybrid vascular graft for peripheral artery disease.
J Cardiovasc Surg (Torino) **2014**, Mar 4. Epub ahead of print.
- 483) Jones RG, Inston NG, Brown T. Arteriovenous fistula salvage utilizing a hybrid vascular graft.
J Vasc Access **2014**, 15(2): 135-137.
- 484) Cox SR, Moawad JA, Marshall LA, Petrincic D, McShannic JR, Steiner R, Fink JA. Patency rates among heparin-bonded and conventional polytetrafluoroethylene grafts for upper extremity hemodialysis access.
JAVA - Journal of the Association for Vascular Access **2014**, 19(3): 153-157.
- 485) Agostinucci A, Cecere P, Forneris G, Cumino A, Suita R, Bellan A, Trogolo M, Ferrero F. "Two Is Better than One": A Composite Graft Made of Two Different Vascular Prostheses for Urgent Hemodialysis Access in a Troublesome Case.
Annals of Vascular Surgery **2015**, 29(5): 1016.e7-1016.e10.
- 486) Waterford SD, Choi BY, Winkel MT, Khoynzhad A. Total Aortic Arch Revascularization with Extra-anatomic Bypass for Takayasu Arteritis.
Ann Vasc Surg **2015**, 29(4): 840.e5-7.

- 487) Wipper S, Ahlbrecht O, Kolbel T, Pflugradt A, von Kodolitsch Y, Debus ES. First implantation of Gore Hybrid Vascular Graft in the right vertebral artery for cerebral debranching in a patient with Loeys-Dietz syndrome.
J Vasc Surg **2015**, 61(3): 793-795.
- 488) Power JR, Chung C, Lajos PS, Faries PL, Marin ML, Tadros RO. Reconstruction of “unreconstructable” critical limb ischemia with hybrid techniques.
J Vasc Surg Cases **2016**, 2: 10-3.
- 489) Surjan RC, Basseres T, Pajeci D, Puzzo DB, Makdissi FF, Machado MA, Battilana AG. A novel technique for hepatic vein reconstruction during hepatectomy.
J Surg Case Rep **2016**, Apr 13, 2016(4).
- 490) Poletto GL, Musto L, Civilini E, Giorgetti P. Clampless and Sutureless Hybrid Technique for Aortic Arch Debranching on a Porcelain Aorta.
Ann Thorac Surg **2016**, 101(6): 2395-2397.
- 491) Berman SS, Banegas SL. Clinical Over-the-balloon placement of the Gore Hybrid Vascular Graft in challenging clinical conditions.
J Vasc Surg Cases **2016**, 2: 123-125.
- 492) Törnqvist P, Hedin U, Ascitutto G, Engström J, Bountouris I, Kristmundsson T, Sterner G, Dias N. VORTEC technique in central venous recanalization for haemodialysis access salvage.
J Vasc Access **2016**, 17(1): e3 - e4.

Clinical

Peripheral Stenting

- 493) Chadda N, Museitif R, Djelmami-Hani M, Ahmed M, Saeed A, Kostopoulos L, Bangash A, Saeed A, Gupta A, Tumuluri R, Shalev Y, Allaqaband S, Bajwa T. Heparin-bonded VIABAHN stent graft for SFA lesions: Incidence of stent thrombosis and heparin-induced thrombocytopenia.
American Journal of Cardiology **2008**, 102(8): TCT-586.
- 494) Chan MG, Miller FJ, Valji K, Kuo MD. Evaluation of expanded polytetrafluoroethylene-covered stents for the treatment of venous outflow stenosis in hemodialysis access grafts.
J Vasc Interv Radiol **2011**, 22(5): 647-53.
- 495) Kuhan G, Abisi S, Braithwaite BD, MacSweeney ST, Whitaker SC, Habib SB. Early results with the use of heparin-bonded stent graft to rescue failed angioplasty of chronic femoropopliteal occlusive lesions: TASC D lesions have a poor outcome.
Cardiovasc Intervent Radiol **2012**, 35(5): 1023-1028.
- 496) Lensvelt MM, Fritschy WM, van Oostayen JA. Results of heparin-bonded ePTFE-covered stents for chronic occlusive superficial femoral artery disease.
J Vasc Surg **2012**, 56(1).
- 497) Lensvelt MM, Wikkeling OR, Van Oostayen JA, Roukema JG, Zeebregts CJ, Reijnen MM. The use of endografts to create an endoluminal femoropopliteal bypass after failed above-knee femoropopliteal open bypass surgery.
Vasc Endovascular Surg **2012**, 46(4): 338-341.

- 498) Geraghty PJ, Mewissen MW, Jaff MR, Ansel GM. Three-year results of the VIBRANT trial of VIABAHN endoprosthesis versus bare nitinol stent implantation for complex superficial femoral artery occlusive disease.
J Vasc Surg **2013**, 58(2).
- 499) Saxon RR, Chervu A, Jones PA, Bajwa TK. Heparin-bonded, expanded polytetrafluoroethylene-lined stent graft in the treatment of femoropopliteal artery disease: 1-year results of the VIPER (Viabahn Endoprosthesis with Heparin Bioactive Surface in the Treatment of Superficial Femoral Artery).
J Vasc Interv Radiol **2013**, 24(2).
- 500) Lammer J, Zeller T, Hausegger KA, Schaefer PJ, Gschwendtner M. Heparin-bonded covered stents versus bare-metal stents for complex femoropopliteal artery lesions: the randomized VIASTAR trial (Viabahn endoprosthesis with PROPATEN bioactive surface [VIA] versus bare nitinol stent in the treatment of long lesions in superficial femoral artery occlusive disease).
J Am Coll Cardiol **2013**, 62(15): 1320-1327.
- 501) The use of the GORE® TIGRIS® Vascular Stent with dual component design in the superficial femoral and popliteal arteries at 6 months. Piorkowski M, Freitas B, Schmidt A, Braunlich S, Ulrich M, Schuster J, Bausback Y, Werner M, Scheinert D.
Journal of Cardiovascular Surgery **2013**, 54(4): 447-453.
- 502) Sawyer A, Fotiadis NI, Namagondlu G, Iyer A, Blunden M, Raftery M, Yaqoob M. Cephalic arch stenosis in autogenous haemodialysis fistulas: Treatment with the viabahn stent-graft.
CardioVascular and Interventional Radiology **2013**, 36(1): 133-139.
- 503) Zeller T, Peeters P, Bosiers M, Lammer J, Brechtel K, Scheinert D, Rastan A. Heparin-Bonded Stent-Graft for the Treatment of Tasc li c and D Femoropopliteal Lesions: The Viabahn-25 Cm Trial.
J Endovasc Ther **2014**, 21(6): 765-774.
- 504) Saunders JH, Abisi S, Altaf N, Yong Y, MacSweeney ST, Whittaker S, Habib S. Long-term outcome of endovascular repair of popliteal artery aneurysm presents a credible alternative to open surgery.
Cardiovasc Interven Radiol **2014**, 37(4): 914-919.
- 505) Smialkowski AO, Huilgol RL. Percutaneous endovascular repair of popliteal artery aneurysms.
Ann Vasc Surg **2014**, 28(6): 1469-1472.
- 506) Piorkowski M, Freitas B, Steiner S, Botsios S, Bausback Y, Scheinert D, Schmidts A. Twelve-Month Experience with the GORE® TIGRIS® Vascular Stent in the Superficial Femoral and Popliteal Arteries.
Journal of Cardiovascular Surgery **2015**, 56(1): 89-95.
- 507) Parthipun A, Diamantopoulos A, Kitrou P, Padayachee S, Karunanithy N, Ahmed I, Zayed H, Katsanos K. Use of a New Hybrid Heparin-Bonded Nitinol Ring Stent in the Popliteal Artery: Procedural and Mid-Term Clinical and Anatomical Outcomes.
Cardiovasc Interven Radiol **2015**, 38(4): 846-854.
- 508) Mohr PJ, Oyama JK, Luu JT, Stinis CT. Clinical Outcomes of Endovascular Treatment of TASC-II C and D Femoropopliteal Lesions with the Viabahn Endoprosthesis.
Cardiovasc Revascularization Med **2015**, 16(8): 465-468.

- 509) Bosiers M, Deloose K, Callaert J, Verbist J, Hendriks J, Lauwers P, Schroe H, Lansink W, Scheinert D, Schmidt A, Zeller T, Beschorner U, Noory E, Torsello G, Austermann M, Peeters P. Superiority of Stent-Grafts for in-Stent Restenosis in the Superficial Femoral Artery: Twelve-Month Results from a Multicenter Randomized Trial. *J Endovasc Ther* **2015**, 22(1): 1-10.
- 510) Golchehr B, Kruse R, van Walraven LA, Lensvelt MMA, Zeebregts CJ, Reijnen MMPJ. Three-Year Outcome of the Heparin-Bonded Viabahn for Superficial Femoral Artery Occlusive Disease. *J Vasc Surg* **2015**, 62(4): 984-989.
- 511) Kruse RR, Poelmann FB, Doomernik D, Burgerhof HGM, Fritschy WM, Moll FL, Reijnen MMPJ. Five-Year Outcome of Self-Expanding Covered Stents for Superficial Femoral Artery Occlusive Disease and an Analysis of Factors Predicting Failure. *J Endovasc Ther* **2015**, 22(6): 855-861.
- 512) Lammer J, Zeller T, Hausegger KA, Schaefer PJ, Gschwendtner M, Mueller-Huelsbeck S, Rand T, Funovics M, Wolf F, Rastan A, Gschwandtner M, Puchner S, Beschorner U, Ristl R, Schoder M. Sustained Benefit at 2 Years for Covered Stents Versus Bare-Metal Stents in Long SFA Lesions: The VIASTAR Trial. *Cardiovasc Intervent Radiol* **2015**, 38(1): 25-32.
- 513) De Backer O, Arnous S, Sandholt B, Brooks M, Biasco L, Franzen O, Lönn L, Bech B, Søndergaard L. Safety and Efficacy of Using the Viabahn Endoprosthesis for Percutaneous Treatment of Vascular Access Complications After Transfemoral Aortic Valve Implantation. *Am J Cardiol* **2015**, 115(8): 1123-1129.
- 514) Schmelter C, Raab U, Lazarus F, Ruppert V, Vorwerk D. Outcomes of AV Fistulas and AV Grafts after Interventional Stent-Graft Deployment in Haemodialysis Patients. *Cardiovasc Intervent Radiol* **2015**, 38(4): 878-886.
- 515) Speziale F, Sirignano P, Menna D, Capoccia L, Mansour W, Serrao E, Ronchey S, Alberti V, Esposito A, Mangialardi N. Ten Years' Experience in Endovascular Repair of Popliteal Artery Aneurysm Using the Viabahn Endoprosthesis: A Report from Two Italian Vascular Centers. *Annals of Vascular Surgery* **2015**, 29(5): 941-949.
- 516) Carmona J, Rits Y, Jones B, Dowers L, Bednarski D, Rubin JR. Patency of the Viabahn Stent Graft for the Treatment of Outflow Stenosis in Hemodialysis Grafts. *Am J Surg* **2016**, 211(3): 551-554.
- 517) Golchehr B, Tielliu IF, Verhoeven EL, Mollenhoff C, Antonello M, Zeebregts CJ, Reijnen MM. Clinical Outcome of Isolated Popliteal Artery Aneurysms Treated with a Heparin-bonded Stent Graft. *Eur J Vasc Endovasc Surg* **2016**, 52(1): 99-104.
- 518) Battaglia G, Turiano SA, Tringale R, Sabatino E, Monaca V. Short- and medium-term results in femoral-popliteal obstructive disease treated with Gore® Tigris® stent. *Ital J Vasc Endovasc Surg* **2016**, 23(1): 5-9.
- 519) Giaquinta A, Veroux P, D'Arrigo G, Virgilio C, Ardita V, Mociskyte D, Veroux M. Endovascular Treatment of Chronic Occluded Popliteal Artery Aneurysm. *Vasc Endovascular Surg* **2016**, 50(1): 16-20.

- 520) Vesely T, DaVanzo W, Behrend T, Dwyer A, Aruny J. Balloon angioplasty versus Viabahn stent graft for treatment of failing or thrombosed prosthetic hemodialysis grafts.
J Vasc Surg **2016**, 64(5): 1400-1410.e1.
- 521) Sibe M, Kaladji A, Boirat C, Cardon A, Chaufour X, Bossavy JP, Saint-Lebes B. French multicenter experience with the GORE TIGRIS Vascular Stent in superficial femoral and popliteal arteries.
J Vasc Surg **2017**, 65(5): 1329-1335.
- 522) Ohki T, Kichikawa K, Yokoi H, Uematsu M, Yamaoka T, Maeda K, Kanaoka Y. Outcomes of the Japanese multicenter Viabahn trial of endovascular stent grafting for superficial femoral artery lesions.
J Vasc Surg **2017**, 66(1): 130-142.e1.
- 523) Jones RG, Willis AP, Tullett K, Riley PL. Results of Stent Graft Placement to Treat Cephalic Arch Stenosis in Hemodialysis Patients with Dysfunctional Brachiocephalic Arteriovenous Fistulas.
J Vasc Interv Radiol **2017**, 28(10): 1417-1421.
- 524) Salsano G, Trezzi M, Barattini M, Puccianti F, Romano N, Zattera T, Chiappini N, Londrino F, Rolla D, Stefanini T. Viabahn stent for hemodialysis shunt: efficacy, long segment recanalization and prognostic factors for reintervention.
J Vasc Access **2017**, (1): 76-83.
- 525) Aurshina A, Hingorani A, Marks N, Ascher E. Utilization of stent grafts in the management of arteriovenous access pseudoaneurysms.
Vascular **2017**, (4): 368-371.
- 526) Holden A, Merrilees S, Buckley B, Connor B, Colgan F, Hill A. First-in-Human Experience with the Gore Balloon-Expandable Covered Endoprosthesis in Iliac Artery Occlusive Disease.
J Endovasc Ther **2017**, 24(1): 11-18.
- 527) Bismuth J, Gray BH, Holden A, Metzger C, Panneton J. Pivotal Study of a Next-Generation Balloon-Expandable Stent-Graft for Treatment of Iliac Occlusive Disease.
J Endovasc Ther **2017**, 24(5): 629-637.
- 528) Steinvil A, Bernardo N, Rogers T, Koifman E, Buchanan K, Alraies MC, Shults C, Torguson R, Okubagzi PG, Pichard AD, Satler LF, Ben-Dor I, Waksman R. Use of an ePTFE-covered nitinol self-expanding stent graft for the treatment off pre-closure device failure during transcatheter aortic valve replacement.
Cardiovasc Revasc Med **2017**, 18(2): 128-132.
- 529) Bavare CS, Street TK, Peden EK, Davies MG, Naoum JJ. Stent Grafts Can Convert Unusable Upper Arm Arteriovenous Fistulas into a Functioning Hemodialysis Access: A Retrospective Case Series.
Front Surg **2017**, 4(13).
- 530) Reijnen MMPJ, van Walraven LA, Fritschy WM, Lensvelt MMA, Zeebregts CJ, Lemson MS, Wikkeling ORM, Smeets L, Holewijn S. 1-Year Results of a Multicenter Randomized Controlled Trial Comparing Heparin-Bonded Endoluminal to Femoropopliteal Bypass.
JACC Cardiovasc Interventions **2017**, 10(22): 2320-2331.

- 531) Venturini M, Marra P, Colombo M, Panzeri M, Gusmini S, Sallemi C, Salvioni M, Lanza C, Agostini G, Balzano G, Tshomba Y, Melissano G, Falconi M, Chiesa R, De Cobelli F, Del Maschio A. Endovascular Repair of 40 Visceral Artery Aneurysms and Pseudoaneurysms with the Viabahn Stent-Graft: Technical Aspects, Clinical Outcome and Mid-Term Patency. *Cardiovasc Intervent Radiol* **2018**, 41(3): 385-397.
- 532) Uhl C, Betz T, Weiss B, Topel I, Steinbauer M. Results of hybrid procedures for treatment of aortoiliac Trans-Atlantic Inter-Society Consensus II D lesions with self-expanding covered heparin-bonded stent grafts. *J Cardiovasc Surg (Torino)* **2018**, Feb 8.
- 533) Lucatelli P, Cini M, Tommasino G, Benvenuti A, Guaccio G, Bascetta S, Neri E, Ricci C. Use of the Gore Tigris Vascular Stent in Advanced Femoropopliteal Peripheral Arterial Disease. *J Vasc Interv Radiol* **2018**, (5): 614-622.
- 534) Schaarschmidt BM, Boos J, Buchbender C, Kropil P, Kropil F, Lanzman RS, Fürst G, Knoefel WT, Antoch G, Thomas C. Heparin-bonded stent graft treatment for major visceral arterial injury after upper abdominal surgery. *Eur Radiol* **2018**, 28(8): 3221-3227.
- 535) Lin TC, Huang CY, Chen PL, Lee CY, Shih CC, Chen IM. Edge Stenosis After Covered Stenting for Long Superficial Femoral Artery Occlusive Disease: Risk Factor Analysis and Prevention with Drug-Coated Balloon Angioplasty. *J Endovasc Ther* **2018**, Apr 1.
- 536) Waezi N, Saha S, Bougioukas I, Emmert A, Danner BC, Baraki H, Kutschka I, Zenker D, Stojanovic T, Jebran AF. Viabahn stent graft compared with prosthetic surgical above-knee bypass in treatment of superficial femoral artery disease: Long-term results of a retrospective analysis. *Medicine (Baltimore)* **2018**, 97(40): e12449.
- 537) Aurshina A, Hingorani A, Marks N, Ascher E. Utilization of stent grafts in the management of arteriovenous access pseudoaneurysms. *Vascular* **2018**, 26(4): 368-371.
- 538) Salsano G, Trezzi M, Barattini M, Puccianti F, Romano N, Zattera T, Chiappini N, Londrino F, Rolla D, Stefanini T. Viabahn stent for hemodialysis shunt: Efficacy, long segment recanalization and prognostic factors for reintervention. *Journal of Vascular Access* **2018**, 19(1): 76-83.
- 539) Miller GA, Preddie DC, Savransky Y, Spergel LM. Use of the Viabahn stent graft for the treatment of recurrent cephalic arch stenosis in hemodialysis accesses. *Journal of vascular surgery* **2018**, 67(2): 522-528.
- 540) Inui T, Deshpande R, Lane JS, Barleben A. External Iliac Occlusion Does Not Preclude Endovascular Management of Aortoiliac Disease-Technique and Evolution of Therapy. *Ann Vasc Surg* **2018**, 53: 184-189.
- 541) Bracale UM, Giribono AM, Spinelli D, Del Guercio L, Pipitò N, Ferrara D, Barillà D, Barbarisi D, Derone G, Benedetto F. Long-term Results of Endovascular Treatment of TASC C and D Aortoiliac Occlusive Disease with Expanded Polytetrafluoroethylene Stent Graft. *Ann Vasc Surg* **2019**, 56: 254-260.

- 542) Lin TC, Chen PL, Lee CY, Shih CC, Chen IM. Covered stent versus bare-metal stents for chronic total occluded long complicated femoropopliteal lesions: A 2-year single center review.
J Chin Med Assoc **2019**, 82(1): 44-49.
- 543) Mohr BA, Sheen AL, Roy-Chaudhury P, Schultz SR, Aruny JE; REVISE Investigators. Clinical and Economic Benefits of Stent Grafts in Dysfunctional and Thrombosed Hemodialysis Access Graft Circuits in the REVISE Randomized Trial.
J Vasc Interv Radiol **2019**, 30(2): 203-211.
- 544) Sedaghat A, Hansen KL, Schahab N, May MC, Weber M, Stundl A, Shamekhi J, Schaefer C, Nickenig G, Sinning JM, Lönn L, Søndergaard L, Werner N, De Backer O. Long-term follow-up after stent graft placement for access-site and access-related vascular injury during TAVI - The Bonn-Copenhagen experience.
Int J Cardiol **2019**, 281: 42-46.
- 545) Uhl C, Dadras A, Reichmann F, Betz T, Zorger N, Toepel I, Steinbauer M. Long-term results of the heparin-bonded Viabahn stent graft in femoropopliteal TASC C and D lesions with a covered stent length of minimum 25 cm.
Vascular **2019**, 2019, 27(5): 553-559.
- 546) Jiang M, Xu H, Zhang Q, Wei N, Xu W, Cui Y, Liu H, Zu M, Wang W, Gao Z. Preliminary application of transjugular intrahepatic portosystemic shunt in individualized treatment of patients with cirrhotic portal hypertension complicated with refractory ascites and variceal hemorrhage.
Nat Med J China **2019**, 99(47): 3737-3740.
- 547) Boutrous ML, Alvarez AC, Okoye OT, Laws JC, Jacobs DL, Smeds MR. Stent-Graft Length Is Associated with Decreased Patency in Treatment of Central Venous Stenosis in Hemodialysis Patients.
Ann Vasc Surg **2019**, Aug 01, 59: 225-230.
- 548) Hull J, Snyder J. Percutaneous Costoclavicular Bypass for Thoracic Outlet Syndrome and Cephalic Arch Occlusion in Hemodialysis Patients.
J Vasc Interv Radiol **2019**, 30(11): 1779-1784.
- 549) Ni Q, Yang S, Xue G, Zhou Z, Zhang L, Ye M. Viabahn Stent Graft for the Endovascular Treatment of Occlusive Lesions in the Femoropopliteal Artery: A Retrospective Cohort Study with 4-Year Follow-Up.
Ann Vasc Surg **2020**, 66: 573-579.
- 550) Uhl C, Betz T, Weiss B, Topel I, Steinbauer M. Results of hybrid procedures for treatment of aortoiliac Trans-Atlantic Inter-Society Consensus II D lesions with self-expanding covered heparin-bonded stent grafts.
J Cardiovasc Surg (Torino) **2020**, Feb 61(1): 93-97.
- 551) Zanabili Al-Sibbai AA, Cambior Santervas LA, Alvarez Marcos F, Rivas Dominguez M, Del Castro Madrazo JA, Llana Coto JM, Alonso Perez M. Midterm Results of Endovascular Treatment for Complete Iliac Axis Occlusions Using Covered Stents.
Ann Vasc Surg **2020**, 63, 241-249.

- 552) Fujimura N, Obara H, Iwasa K, Hattori T, Yamamoto H, Watada S, Kobayashi T, Suematsu N, Mitsuoka H, Soga Y, Nakama T, Sakamoto R, Ichihashi. Preliminary experience of Viabahn stent graft inside the occluded prosthetic bypass graft for the treatment of above knee femoropopliteal bypass occlusion. *Cardiovasc Intervent Radiol* **2020**, 43(2): 223-230.
- 553) Piazza M, Squizzato F, Saviane G, Grego F, Antonello M. Geometrical analysis and preliminary results for the endovascular reconstruction of aortic bifurcation using new-generation balloon expandable covered stents in the kissing conformation. *Ann Vasc Surg* **2020**, 67: 148-157.
- 554) Panneton JM, Bismuth J, Gray BH, Holden A. Three-Year Follow-up of Patients with Iliac Occlusive Disease Treated With the Viabahn Balloon- Expandable Endoprosthesis. *J Endovasc Ther* **2020**, 27(5): 728-736.
- 555) Peker A, Balendran B, Hilliard N, Shaida N, Winterbottom A, Koo B, Krokidis M. Use of heparin coated vascular stents in femoropopliteal chronic total occlusions: Long term outcomes. *Eur J Radiol* **2020**, 130: 109163.
- 556) Bohme T, Noory E, Brechtel K, Scheinert D, Bosiers M, Beschorner U, Zeller T. Heparin-Bonded Stent-Graft for the Treatment of TASC II C and D Femoropopliteal Lesions: 36-Month Results of the Viabahn 25 cm Trial. *J Endovasc Ther* **2020**, 28(2): 222-228.
- 557) Bosiers M, Deloose K, Callaert J, Verbist J, Hendriks J, Lauwers P, Schroe H, Lansink W, Scheinert D, Schmidt A, Zeller T, Beschorner U, Noory E, Torsello G, Austermann M, Wauters J. Stent-grafts are the best way to treat complex in-stent restenosis lesions in the superficial femoral artery: 24-month results from a multicenter randomized trial. *J Cardiovasc Surg (Torino)* **2020**, 61(5): 617-625.
- 558) Giannopoulos S, Lyden SP, Bisdas T, Micari A, Parikh SA, Jaff MR, Schneider PA, Armstrong EJ. Endovascular Intervention for the Treatment of Trans-Atlantic Inter-Society Consensus (TASC) D Femoropopliteal Lesions: A Systematic Review and Meta-Analysis. *Cardiovasc Revasc Med* **2021**, 22: 52-65.
- 559) Iida O, Takahara M, Soga Y, Yamaoka T, Nanto S, Kuratani T, Sakata Y, Mano T. One-Year Outcomes of Heparin-Bonded Stent-Graft Therapy for Real-World Femoropopliteal Lesions and the Association of Patency with the Prothrombotic State Based on the Prospective, Observational, Multicenter Viabahn Stent-Graft Placement for Femoropopliteal Diseases Requiring Endovascular Therapy (VANQUISH) Study. *J Endovasc Ther* **2021**, 28(1): 123-131.
- 560) Deslarzes-Dubuis C, Tran K, Colvard BD, Lee JT. Renal Stent Complications and Impact on Renal Function after Standard Fenestrated Endovascular Aneurysm Repair. Deslarzes-Dubuis C, Tran K, Colvard BD, Lee JT. *Ann Vasc Surg* **2021**, 72: 106-113.
- 561) Clark EC, Babrowski TA, Milner R. Outcomes of chimney and fenestrated endografting using Viabahn VBX and atrium iCAST stents. *J Cardiovasc Surg (Torino)* **2021**, 62(2): 136-145.

- 562) Tayfur K, Bademci MS. Popliteal artery aneurysms treatments: Early midterm results of the use of endovascular stent grafts.
Turk J Med Sci **2021**, 51(3): 1106-1114.
- 563) Mezzetto L, Mastroianni D, Leone N, Gennai S, Silingardi R, Veraldi GF, Piazza M, Squizzato F, Antonello M. Preliminary Outcomes of Viabahn Balloon-Expandable Endoprosthesis as Bridging Stent in Renal Arteries During Fenestrated Endovascular Aortic Repair.
J Endovasc Ther **2021**, 28(4): 575-584.
- 564) Ruffino MA, Fronda M, Bergamasco L, Natrella M, Fanelli G, Bellosta R, Pegorer M, Attisani L, Ruggiero M, Malfa P, Patane' D, Lucatelli P, Corona M, Ricci C, Candeloro L, Ferri M, Varello S, Gibello L, Veraldi GF, Mezzetto L, Fonio P. Prognostic risk factors for loss of patency after femoropopliteal bailout stenting with dual-component stent: results from the TIGRIS Italian Multicenter Registry.
Radiol Med **2021**, 126(8): 1129-1137.
- 565) Ohki T, Kichikawa K, Yokoi H, Iida O, Yamaoka T, Maeda K, Kanaoka Y. Long-term results of the Japanese multicenter Viabahn trial of heparin bonded endovascular stent grafts for long and complex lesions in the superficial femoral artery.
J Vasc Surg **2021**, 74(6): 1958-1967.e2.
- 566) Fujihara M, Takahara M, Yamaoka T, Iida O, Kojima T, Tobita K, Nakama T, Kyuragi R, Ichihashi S, Soga Y. Clinical outcomes of endovascular procedure using VIABAHN® VBX covered stent in complex aortoiliac artery disease: Result from AVOCADO study.
Catheter Cardiovasc Interv **2021**, 98(5): 928-937.
- 567) Brahmandam A, Chen JF, Tonnessen BH, Chaar CIO, Fischer U, Dardik A, Guzman RJ, Nassiri N. Alternative endograft aortoiliac reconstruction for iliac branch endoprostheses.
Ann Vasc Surg **2021**, 77: 38-46.
- 568) Ueda T, Murata S, Tajima H, Saito H, Yasui D, Sugihara F, Mizushima S, Mine T, Kawamata H, Hayashi H, Kumita SI. Endovascular treatment with Viabahn stent-grafts for arterial injury and bleeding at the visceral arteries: initial and midterm results.
Jpn J Radiol **2021**, 40(2): 202-209.
- 569) Marples R, Binks M, Spina R, Wright M, Huilgol R. Prophylactic paclitaxel-eluting stent placement does not improve covered femoropopliteal stent patency.
Surg Open Sci **2021**, 16(7): 18-21.
- 570) Parra JR, Bertino FJ, Shin DS, Chick JFB, Koo KSH. Portomesenteric and portosystemic venous reconstructions in children using balloon-expandable endoprostheses.
Pediatr Radiol **2022**, 52(3): 493-500.
- 571) Ning J, Ma W, Oriowo B, Aplin B, Lurie F. Outcomes of Popliteal Stent-Graft Placement at the Artery Hinge Point for Popliteal Artery Aneurysm.
Ann Vasc Surg **2022**, 84: 270-278.
- 572) Groot Jebbink E, Wijck I, Holewijn S, Iida O, Spinelli, D, Saxon RR et., al. Individual patient data meta-analysis of patients treated with a heparin-bonded Viabahn in the femoropopliteal artery for chronic limb-threatening ischemia.
Catheter Cardiovasc Interv **2022**, 99(5): 1714-1722.

- 573) Pickney CC, Rowse J, Quatromoni J, Kirksey L, Caputo FJ, Lyden SP, Smolock CJ. Outcomes of Gore® Iliac Branch Endoprosthesis with Internal Iliac Component versus Gore® Viabahn® VBX.
J Vasc Surg **2022**, 76(3): 733-740.e2.
- 574) Shin DS, Jackson TR, Bertino FJ, Monroe EJ, Hage AN, Lee E, Ingraham CR, Vaidya S, Chick JFB. Kissing Viabahn VBX Stent-Graft Reconstruction of Thoracic Central Veins for Management of Superior Vena Cava Syndrome.
J Vasc Surg Venous Lymphat Disord **2022**, 10(6): 1279-1287.e1.
- 575) Barnes JA, Eid MA, Moore K, Aryal S, Gebre E, Woodard JN, Kitpanit N, Mao J, Kuwayama DP, Suckow BD, Schneider D, Abushaikha T, Zusterzeel R, Vemulapalli S, Shenkman EA, Williams J, Sedrakyan A, Goodney P. Use of real-world data and clinical registries to identify new uses of existing vascular endografts: combined use of GORE EXCLUDER Iliac Branch Endoprosthesis and GORE VIABAHN VBX Balloon Expandable Endoprosthesis.
BMJ Surg Interv Health Technol **2022**, 4(1): e000085.
- 576) van den Hondel D, van Walraven LA, Holewijn S, Reijnen MM. Endovascular bypass as a strategy for long femoropopliteal lesions.
J Cardiovasc Surg (Torino) **2022**, 63(5): 562-574.
- 577) Antonello M, Xodo A, Squizzato F, Zavatta M, Maturi C, Piazza M. Preliminary experience with new generation balloon expandable stent-graft in the treatment of innominate artery obstructive disease.
J Cardiovasc Surg (Torino) **2022**, 63(6): 682-686.
- 578) Garcia Dominguez LJ, Moreno IR, Lopez MR, Ribe, Bernal RL, Hernandez Sanfelix A. Distal Endarterectomy Combined with Endovascular Proximal Treatment: The Hybrid DEEP Retrograde Technique for High-Complexity Infrainguinal Disease.
J Endovasc Ther **2023**, 30(2): 232-240.
- 579) Tomoi Y, Takahara M, Soga Y, Hata Y, Iida O, Yamaoka T, Hayakawa N, Fujihara M, Ando K. Clinical outcome of endovascular therapy using a VIABAHN VBX-covered stent for complex aortoiliac artery disease: the AVOCADO II study.
Heart Vessels **2023**, 38(10): 1288-1297.
- 580) Izumi H, Yoshii H, Fujino R, Takeo S, Nomura E, Mukai M, Suda S, Tomita K, Kamei S, Ogawa Y, Hasebe T, Makuuchi H. Endovascular Treatment of Postoperative Hemorrhage after Pancreatectomy: A Retrospective Study.
BMC Gastroenterol **2023**, 23(1): 379.
- 581) Usai M V, Gargiulo M, Haulon S, Tielliu I, Boeckler D, Verhagen H, Fernández A M, Austermann M J. One-Year Results of a Balloon Expandable Endoprosthesis as a Bridging Stent for Branched Endovascular Aortic Repair.
J Vasc Surg **2023**, 78(6): 1376-1382.e2.
- 582) Soukas P, Becker M, Stark K, Tepe G, Investigators R M. Three-Year Results of the GORE VIABAHN Endoprosthesis in the Superficial Femoral Artery for In-Stent Restenosis.
J Soc Cardiovasc Angiogr Interv **2023**, 2(3): 100598.
- 583) Holden A, Takele E, Hill A, Sakhuja R, Metzger C, Gray BH, Cavadino A. Long-Term Follow-up of Subjects with Iliac Occlusive Disease Treated with the Viabahn VBX Balloon-Expandable Endoprosthesis.
J Endovasc Ther **2023**, Apr 19. Epub ahead of print.

- 584) Ferrari E, Wang C, Tozzi P, von Segesser LK. Is the Mid-Term Patency Rate of Small-Diameter Viabahn Stent-Grafts in Peripheral Artery Disease Related to Their Length? A Systematic Review.
J Endovasc Ther **2023**, Jun 8. Epub ahead of print.
- 585) Gabrielli R, Siani A, Smedile G, Rizzo A R, Antonelli R, Vivo G D, Accrocca F, Bartoli S. Simultaneous Aortoiliac Kissing Endovascular Stenting for Management of Isolated Monolateral Common Iliac Artery Aneurysm with No Proximal Landing Zone.
Vascular **2023**, Aug 5. Epub ahead of print.
- 586) Ye M, Ni Q, Zhu Y, Du Y, Wang Y, Guo X, Zhang L, Feng Z. Stent Graft vs Drug-Coated Balloon in Endovascular Treatment of Complex Femoropopliteal Artery Lesions: A 2-Center Experience.
J Endovasc Ther **2023**, Sep 20. Epub ahead of print.
- 587) Barabino E, Nivolli A, Pittaluga G, Arnò M, Gazzo P, Tosques M, Ivaldi D. Endovascular Treatment of TASC C and D Femoropopliteal Arterial Disease with Heparin-Bonded Covered Stents: The Impact of Distal Run-Off Vessels.
J Endovasc Ther **2023**, Dec 22. Epub ahead of print.
- 588) Brendel J M, Mangold T, Lescan M, Schmehl J, Ghibes P, Grimm A, Greulich S, Krumm P, Artzner C, Grözinger G, Estler A. Viabahn Stent Graft for Arterial Injury Management: Safety, Technical Success, and Long-Term Outcome.
CVIR Endovasc **2024**, 7(1): 23.
- 589) Betz T, Pfister K, Schierling W, Sachsamanis G, Radunski J, Ernsting C N, Stehr A. Treatment of Symptomatic Popliteal Artery Lesions: An Obituary of the GORE® TIGRIS® Vascular Stent.
Clin Hemorheol Microcirc **2024** Feb 8. Epub ahead of print.
- 590) Walraven L A van, Wijck I P S van, Holewijn S, Fritschy W M, Zeebregts C J, Lemson S M, Wikkeling O R M, Reijnen M M P J. Five-Year Outcomes of the SuperB Trial: A Multicenter Randomized Controlled Trial Comparing Heparin-Bonded Endograft to Surgical Femoropopliteal Bypass.
J Endovasc Ther **2024**, Feb 13. Epub ahead of print.
- 591) Warburton T M, Thomas S D, Holden A, Katib N, Varcoe R L. A Cost-Consequence Analysis Comparing Balloon-Expandable Covered Stents for the Management of Aortoiliac Occlusive Disease.
J Endovasc Ther **2024**, Feb 27. Epub ahead of print.
- 592) Iida O, Ohki T, Soga Y, Suematsu N, Nakama T, Yamaoka T, Tobita K, Ichihashi S. Five-Year Outcomes of the GORE VIABAHN Endoprosthesis for the Treatment of Complex Femoropopliteal Lesions from a Japanese Postmarket Surveillance Study.
Vasc Med **2024**, Mar 27. Epub ahead of print.
- 593) Walraven L A van, Kalil M D V, Veen D van der, Bosiers M J, Deloose K, Holewijn S, Zeebregts C J, Reijnen M M P J. Post Hoc Analysis of the SuperB and Zilverpass Trials for Treatment of Long and Complex Superficial Femoral Artery Lesions.
J Vasc Surg **2024**, Apr 9. Epub ahead of print.

- 594) Kazuki M, Kobayashi T, Emura S, Okazaki T, Mochizuki S, Sato T, Taniguchi M, Futagami D, Inoue R, Tomota M, Hiraoka T, Shimonaga T, Tachibana H, Shimizu H, Takahashi S. Medium-Term Outcomes of Treatment with a VIABAHN VBX Covered Stent for Aortoiliac Occlusive Lesions in Patients with Peripheral Artery Disease. *Ann Vasc Surg* **2024**, Apr 9. Epub ahead of print.
- 595) Walraven L A van, Velandia-Sánchez A, Iqbal K, Zeebregts C J, Holewijn S, Reijnen M M P J. Impact on Hospital Resource Utilization of Endoluminal Bypass Using the Viabahn Endoprosthesis with Heparin Bioactive Surface Compared with Surgical Femoropopliteal Bypass. *J Endovasc Ther* **2024**, Apr 9. Epub ahead of print.
- 596) Mezzetto L, D'oria M, Gallitto E, Troisi N, Ferrer C, Zanetti E, Grando B, Mastroilli D, Giudice R, Berchiolli R, Gargiulo M, Lepidi S, Veraldi G F. Early and Midterm Results of Covered Balloon-Expandable Stents (VBX-Gore) for Endovascular Treatment of Chronic Aorto-Iliac Occlusion. *J Cardiovasc Surg* **2024**, Apr 15. Epub ahead of print.

Case Reports

- 597) Lesperance RN, Singh NN, Curry TK, Andersen CA. Retrograde stent-graft angioplasty of superficial femoral artery occlusion in a claudicant. *Vasc Endovascular Surg* **2009**, 43(1): 83-86.
- 598) Wagner JK, Chaer RA, Rhee RY, Marone LK. True lumen re-entry after extravascular recanalization of a superficial femoral artery chronic total occlusion. *J Vasc Surg* **2010**, 52(1): 216-218.
- 599) Bloemsmas GC, van Oostayen JA, Reijnen MM. Endovascular repair of a ruptured type II renal artery aneurysm using an endograft. *Ann Vasc Surg* **2012**, 26(7): 1011-1013.
- 600) Chaudhuri A, Than M. Synchronous Endobypass of Bilateral Superficial Femoral Artery Aneurysms (After Bilateral Popliteal Aneurysm Bypass Surgery) Using Heparin-Bonded Stent-Grafts. *EJVES Extra* **2013**, 26(6): 58-60.
- 601) Chaudhuri A. Arterial Thoracic Outlet Syndrome Following Clavicular Fracture Managed by Endobypass Using a Heparin-bonded Endoprosthesis. *EJVES Extra* **2013**, 25(4): 32-34.
- 602) Kim SS, Jeong MH, Kim JE, Yim YR, Park HJ, Lee SH, Rhew SH, Jeong YW, Kim JH, Cho JG, Park JC. Successful treatment of a ruptured subclavian artery aneurysm presenting as hemoptysis with a covered stent. *Chonnam medical journal* **2014**, 50(2): 70-73.
- 603) Macedo FI, Sciarretta JD, Salsamendi J, Karmacharya J, Romano A, Namias N Repair of an acute blunt popliteal artery trauma via endovascular approach. *Ann Vasc Surg* **2015**, 29(2): 366.e5-366.e10.
- 604) Sirignano P, Citone M, Menna D, Mansour W, Montelione N, Capoccia L, Speziale F. Superficial Femoral Artery Stent Disruption Treated by Peripheral Endograft. *Ann Vasc Surg* **2015**, 29(8): 1661.e5-8.
- 605) Park SK, Hwang JK, Park SC, Kim SD. Endovascular treatment of a spontaneous aneurysm in the axillary artery. *Interactive cardiovascular and thoracic surgery* **2015**, 20(1): 140-142.

- 606) Carollo A, Gagliardo G, DeVito PM, Cicchillo M. Stent graft repair of anastomotic pseudoaneurysm of femoral-popliteal bypass graft following patch angioplasty. *J Surg Case Rep* **2016**, 12: 1-3.
- 607) Guerrero-Hernandez M, Hinojosa CA, Anaya-Ayala JE, Elenes E, Torre A. Endovascular Reconstruction of Extrahepatic Portal Vein in Noncirrhotic and Nonmalignant Chronic Portal Vein Thrombosis Secondary to an Iatrogenic Stenotic Lesion. *Vasc Endovascular Surg* **2016**, 50(8): 559-562.
- 608) Corti R, Quaretti P, Galli F, Moramarco LP, Cionfoli N, Leati G, Corbetta R, Tozzi M. New therapeutic options provided by off-label deployment of stent graft for tailored arteriovenous access salvage: Two cases. *Open Med Case Rep* **2017**, 5: 2050313X17741827.
- 609) Saydam O, Şerefli D, Atay M, Sert C. Endovascular Management of Right Subclavian Artery Pseudoaneurysm due to War Injury in Adolescent Patient. *Case Rep Vasc Med* **2017**, 9030457.
- 610) Chen AY, Laniado I Jr, Lin PH. Durability of the Viabahn stent graft after axillary artery pseudoaneurysm exclusion. *J Vasc Surg Cases Innov Tech* **2017**, 3(2): 99-101.
- 611) Pecoraro F, Dinoto E, Bracale UM, Badalamenti G, Farina A, Bajardi G. Symptomatic Deep Femoral Artery Pseudoaneurysm Endovascular Exclusion. Case Report and Literature Review. *Ann Vasc Surg* **2017**, 42, 303, e5-303e9.
- 612) Jones RG, Willis AP, Tullett K, Ridley PL. Results of Stent Graft Placement to Treat Cephalic Arch Stenosis in Hemodialysis Patients with Dysfunctional Brachiocephalic Arteriovenous Fistulas. *Journal of Vascular and Interventional Radiology* **2017**, 28(10): 1417-1421.
- 613) Bismuth J, Gray BH, Holden A, Metzger C, Panneton J. Pivotal Study of a Next-Generation Balloon-Expandable Stent-Graft for Treatment of Iliac Occlusive Disease. *J Endovasc Ther* **2017**, 24(5): 629-637.
- 614) Ertugay S, Daylan A, Bozkaya H, Oğuz E, Apaydin A, Parıldar M, Posacioğlu H. Snorkel Technique for Inferior Mesenteric Artery During Endovascular Repair of Abdominal Aortic Aneurysm. *Vasc Endovascular Surg* **2018**, (3): 233-236.
- 615) Hu H, Chen X, Wu Z, Zhao J, Huang B, Ma Y, Yuan D, Yang Y, Xiong F. Aneurysmal degeneration of an aorto-renal bypass for Takayasu renal artery stenosis: a novel endovascular intervention. *Ann Vasc Surg* **2018**, May; 49: 316.e1-316.e4.
- 616) Mercado-Alamo A, Zaitoun A, Neupane S, Davis T. Superficial femoral artery aneurysm as a cause of deep vein thrombosis treated with a covered stent. *J Invasive Cardiol* **2018**, 30(11): E124-E125.
- 617) Ghonem ME, Yuan X, Mitsis A, Nienaber CA. Interventional repair of a vascular aneurysm in a patient with Marfan syndrome. *SAGE Open Med Case Rep* **2018**, 23;6: 2050313X18788448.

- 618) Ouchi T, Kato N, Nakajima K, Higashigawa T, Hashimoto T, Chino S, Sakuma H. Splenic artery aneurysm treated with endovascular stent grafting: A case report and review of literature.
Vasc Endovascular Surg **2018**, 52(8): 663-668.
- 619) D'Oria M, Chiarandini S, Pipitone M, Calvagna C, Riccitelli F, Rotelli A, Zamolo F, Griselli F. Urgent Use of Gore Excluder Iliac Branch Endoprosthesis with Left Transaxillary Approach for Preservation of the Residual Hypogastric Artery: A Case Series.
Ann Vasc Surg **2018**, 51: 326.e17-326.e21.
- 620) Hu H, Chen X, Wu Z, Zhao J, Huang B, Ma Y, Yuan D, Yang Y, Xiong F. Aneurysmal Degeneration of an Aortorenal Bypass for Takayasu Renal Artery Stenosis: A Novel Endovascular Intervention.
Ann Vasc Surg **2018**, 49: 316.e1-316.e4.
- 621) Juscafresa LC, Alfaro MP, Grochowicz L, Lorenzo JIL, Jaureguizar JIB. Endovascular treatment of a splenic vein aneurysm through a transhepatic approach.
Diagn Interv Radiol **2019**, 25(2): 166-168.
- 622) Onishi Y, Kimura H, Kanagaki M, Oka S, Fukumoto G, Otani T, Matsubara N, Kawabata K. Placement of a Viabahn stent-graft for hepatic artery pseudoaneurysm complicated by arterial dissection caused by a guiding sheath.
Radiol Case Rep **2019** Apr 2, 14(6): 711-713.
- 623) Kojima Y, Higuchi R, Saji M, Takamisawa I, Tobaru T, Takayama M. Complete endovascular repair of iliac artery perforation during transcatheter aortic valve implantation: a bailout with Viabahn endoprosthesis.
Cardiovasc Interv Ther **2019**, Apr 30.
- 624) Yoshida R, Takagi K, Morita Y, Komeyama S, Morishima I. Squat and Jump: A Rare Case of Stent-Graft Migration During Deployment.
Clin Med Insights Case Rep **2019**, Sep 22, 12:1179547619873919.
- 625) Dos Reis JMC, Kudo FA, do Carmo Bastos M. Fracture of a popliteal nitinol stent and pseudoaneurysm: a case report and review of the literature.
J Surg Case Rep **2019**, Nov 11: rjz312.
- 626) Baldwin D, Mashbari H, Chow KL, Sarhan M. Ruptured Superficial Femoral Artery Anastomotic Pseudoaneurysm after 30 Years.
Case Rep Vasc Med **2019**, Jul 22, 1679214.
- 627) Naddaf A, Hasanadka R, Hood D, Hodgson K. Repair of an Anastomotic Pseudoaneurysm with a Novel Hybrid Technique.
Ann Vasc Surg **2020**, Feb 63: 439-442.
- 628) Spinella G, Mambrini S, Finotello A, Conti M, Del Pizzo R, Pratesi G, Palombo D, Pane B. Endovascular Treatment of an Internal Iliac Artery Aneurysm in a Patient with Previous Aortic Surgery Using a Novel Covered Stent Graft.
Ann Vasc Surg **2020**, Apr 64: 412.e15-412.e19.
- 629) Elliott JE, Jenkins J. Management of a large ruptured popliteal artery aneurysm involving combined deployment of a covered stent graft and evacuation of popliteal fossa hematoma.
J Vasc Surg Cases Innov Tech **2020**, 6(1): 27-30.

- 630) Kusumoto S, Muroya T, Matsumoto Y, Hata S, Kawano H, Maemura K. Collapse of VBX Balloon-Expandable Endoprosthesis in Bilateral Common Iliac Arteries in a Lean, Elderly Patient with Bent Back.
Ann Vasc Surg **2020**, 66: 670.e5-670.e8.
- 631) Sojka M, Szmygin M, Pyra K, Kuczynska M, Jargiello T. Acute renal artery stenting recovered renal function after spontaneous rupture of renal artery aneurysm - case report.
Pol J Radiol **2020**, Jan 17, 85: e29-e31.
- 632) Ying A, Al-Asady R, Vicaretti M. Endovascular treatment of a large iatrogenic popliteal arteriovenous fistula.
J Vasc Surg Cases Innov Tech **2020**, 6(1): 129-132.
- 633) Okugi S, Watanabe K, Kunii Y, Koide M. Surgical and endovascular treatment of a bilateral deep femoral artery aneurysm.
Interact Cardiovasc Thorac Surg **2020**, 30(6): 945-946.
- 634) Tan R, Sieunarine K. Superficial Femoral Artery Pseudoaneurysm as a Delayed Complication of TurboHawk Atherectomy.
Ann Vasc Surg **2020**, 68: 568.e17-568.e21.
- 635) Zarkowsky DS, Johnson C, Hiramoto JS. Coil-Covering Caliber-Conforming Stent Grafting: The 4CSG Technique.
Ann Vasc Surg **2020**, 69: 448.e1-448.e3.
- 636) Yoshioka N, Takagi K, Morita Y, Kawase M, Morishima I. Endovascular treatment of arterio-ureteral fistula with new-generation balloon-expandable stent graft using a 7-French system.
SAGE Open Med Case Rep **2020**, 8:2050313X20959219.
- 637) Antonello M., Squizzato F., Piazza M. The Viabahn balloon expandable stent for endovascular reconstruction of the infrarenal aorta and its bifurcation in cases of severe obstructive disease.
Vascular **2021**; 29(1): 40-44.
- 638) D'Oria M, Griselli F, Mastroianni D, Gorgatti F, Bassini S, Riccitelli F, Calvagna C, Zamolo F, Lepidi S. Secondary Relining with Focal Flaring of Novel-Generation Balloon-Expandable Covered Stents for Endovascular Treatment of Significant Diameter Mismatch in the Aorto-Iliac Territory.
Vascular **2021**, 29(2): 207-212.
- 639) Iwakoshi Shinichi, Inagaki Masahiro, Yoshiyama Yutaka, Shimohara Yuichi, Yamashita Masanori, Ichihashi Shigeo, Kichikawa Kimihiko. Modifying the "Eye of the Tiger" Technique: Preserving Gluteal Artery Perfusion in the Treatment of an Aneurysm of the Hypogastric Artery.
Vasc Endovascular Surg **2021**, 55(3): 277-281.
- 640) Elboraey M, Toskich BB, Lewis AR, Ritchie CA, Frey GT, Devcic Z. Iliocaval reconstruction of chronically thrombosed cylindrical inferior vena cava filters with balloon expandable covered stent-grafts.
J Vasc Surg Cases Innov Tech **2021**; 7(3): 454-457.
- 641) Khan A, Bailey CW. Unique Method of Transjugular Intrahepatic Portosystemic Shunt Reduction for Refractory Hepatic Encephalopathy.
Cureus **2021**, 13(10): e18838.

- 642) Ueda T, Murata S, Tajima H, Saito H, Yasui D. Emergency endovascular treatment using a Viabahn stent graft for upper and lower extremity arterial bleeding: a retrospective study. *CVIR Endovasc* **2021**; 4(1): 83.
- 643) Wei R, Zhang H, Guo W. Viabahn-assisted extra-arterial bypass combined with surgical arterial endarterectomy as a salvage technique to treat critical limb ischemia. *Ann Vasc Surg* **2022**, 79: 440.e1-440.e7.
- 644) Iida O, Ohki T, Soga Y, Suematsu N, Nakama T. Twelve-Month Outcomes from the Japanese Post-Market Surveillance Study of the Viabahn Endoprosthesis as Treatment for Symptomatic Peripheral Arterial Disease in the Superficial Femoral Arteries. *J Endovasc Ther* **2022**; 29(6): 855-865.
- 645) Jones RG, Willis AP. Use of a VBX balloon expandable stent-graft for management of right brachiocephalic vein stenosis. *J Vasc Access* **2022**, 23(3): 477-480.
- 646) Sawamura S, Koike Y, Yamamoto T, Terauchi M, Koyama S, Utsunomiya D. The use of viabahn VBX stent-grafts for the treatment of extrahepatic portal vein hemorrhage. *Minim Invasive Ther Allied Technol* **2022**, 31(7): 1066-1069.
- 647) Perri M, Timpani C, Capoccia L, Bianchi G, Balzano RF, Popolizio T, Pennelli AM, Guglielmi G, D'Elia M, Filauri P. Endovascular repair of isolated post-traumatic subclavian artery false-aneurysm (FA) using gore viabahn vbx-balloon-expandable (BE) stent-graft: case report and literature review. *Acta Biomed* **2022**, 93(S1): e2022080.
- 648) Tanaka C, Furuya H, Kamei S, Suda S, Yamaguchi M. Endovascular Repair for Abdominal Aneurysm with Concomitant Aortoiliac Vein Fistula Diagnosed by Four-Dimensional Computed Tomography. *Ann Vasc Dis* **2022**, 15(4): 337-340.
- 649) Kono T, Otsuka H, Anegawa T, Oryoji A, Shintani Y, Nakamura E, Hiromatsu S, Tayama E. Endovascular Aortic Repair for Heavily Calcified Abdominal Aortic Stenosis Using the Gore Viabahn VBX Balloon-Expandable Covered Stent. *Kurume Med J* **2023**, 68(2): 145-148.
- 650) Kawaguchi T, Seiyama K, Ugawa S, Nosaka K, Doi M. A Successful Transfemoral Transcatheter Aortic Valve Replacement Case with VIABAHN® VBX Balloon-expandable Stent-graft and Long Dryseal Sheath for Challenging Access Route. *Clin Case Rep* **2023**, 11(11): e8178.
- 651) Ciofani L, Massi I, Acciarri P. A rare case of bilateral isolated internal iliac artery aneurysms excluded with VBX covered stents. *Vascular* **2023**, Feb 3. Epub ahead of print.
- 652) Zhui L, Chuli J, Yangyang F, Yu Z, Wei R. Uncommon Presentation of Recurrent Lung Adenocarcinoma: A Finger Ulcer Induced by Subclavian Artery Invasion Successfully Healed with Viabahn VBX Treatment. *Cureus* **2024**, 16(3): e55885.
- 653) Akai T, Kaneko T, Furuya T. Endovascular Repair of an Abdominal Aortic Aneurysm with External Iliac Artery Occlusion Using VBX as the Contralateral Leg via Axillary Delivery: A Case Report. *Medicine* **2024**, 103(14): e37731.

Clinical

Aortic Surgery

- 654) Chiesa R, Kahlberg A, Mascia D, Tshomba Y, Civilini E, Melissano G. Use of a novel hybrid vascular graft for sutureless revascularization of the renal arteries during open thoracoabdominal aortic aneurysm repair.
J Vasc Surg **2014**, 60(3): 622-630.
- 655) Setacci F, Pecoraro F, Chaykovska L, Mangialardi N, Shingaki M, Veith FJ, Rancic Z, Lachat M. The Gore Hybrid Vascular Graft in renovisceral debranching for complex aortic aneurysm repair.
J Vasc Surg **2016**, S0741-5214(16), 00151-8.

Case Reports

- 656) Bornak A, Goldstein LJ, Rey J, Medina A, Yang JK, Velazquez OC, Karmacharya J. Aortic aneurysmal repair with sutureless visceral revascularization using novel hybrid vascular graft and a gradual funneling technique.
Vasc Endovascular Surg **2012**, 46(3). 258-261.
- 657) Lee JD, Williams JB, Winkler JL. One-stage triple hybrid arch debranching.
Innovations **2013**, 8(1): 67-69.
- 658) Levack MM, Bavaria JE, Gorman RC, Gorman JH, Ryan LP. Rapid aortic arch debranching using the Gore hybrid vascular graft.
The Annals of thoracic surgery **2013**, 95(6): e163-165.
- 659) Bonardelli S, Nodari F, Lucia MD, Maffei R, Benenati A, Botteri E. Hybrid Gore® Vascular Graft: A New Tool for the Hybrid Treatment of Thoraco-Abdominal Aneurysms.
J Vasc Med Surg **2015**, 3:217.
- 660) Sivaraman S, Harris D, Bhardwaj A, Steiner G, Magarakis M, Sarkar R, Crawford R, Toursavadkoshi S. Application of a Hybrid Vascular Graft for Rapid Endoluminal Branch Anastomoses during Open Aortic Reconstruction.
Vasc Endovascular Surg **2016**, 50(3): 160-163.
- 661) Martinelli O, Malaj A, Gattuso R, Irace L, Gossetti B. Juxtarenal Inflammatory Aneurysm Treated with Bilateral Iliac-Renal Bypass Using the Gore Hybrid Device and Total Sealing of the Aneurysmal Sac with a Nellix Device.
Ann Vasc Surg **2017**, 38: 321.e13-321.e18.

Clinical

Aortic Stenting

- 662) Wang L, Huang Y, Guo D, Xu X, Chen B, Jiang J, Yang J, Shi Z, Zhu T, Dong Z, Shi Y, Tang X, Yue J, Hong X, Chen G, Chen Y, Zhou X, Fu W, Wang Y. Application of triple-chimney technique using C-TAG and Viabahn or Excluder iliac extension in TEVAR treatment of aortic arch dilation diseases.
J Thorac Dis **2018**, 10(6): 3783-3790.
- 663) Ertugay S, Daylan A, Bozkaya H, Oguz E, Apaydin A, Parildar M, Posacioglu H. Snorkel Technique for Inferior Mesenteric Artery During Endovascular Repair of Abdominal Aortic Aneurysm.
Vasc Endovascular Surg **2018**, 52(3): 233-236.

- 664) Wooster M, Armstrong P, Back M. Hypogastric Preservation Using Retrograde Endovascular Bypass.
Ann Vasc Surg **2018**, 52: 67-71
- 665) Pasveer E, van Eps RGS, Wever JJ, van Overhagen H, van Dijk LC, Veger HTC. Endovascular Revascularization of a Chronic Occluded Aortobifemoral Bypass.
Ann Vasc Surg **2019**, 58: 374-376.
- 666) Oderich GS, Farber MA, Silveira PG, Tadros R, Marin M, Fillinger M, Makaroun M, Hemmer J, Madden M. Technical aspects and 30-day outcomes of the prospective early feasibility study of the GORE EXCLUDER Thoracoabdominal Branched Endoprosthesis (TAMBE) to treat pararenal and extent IV thoracoabdominal aortic aneurysms.
J Vasc Surg **2019**, 70(2): 358-368.e6.
- 667) Hsu CP, Huang CY, Chen HT. Combined surgical and endovascular treatment with arch preservation of acute DeBakey type I aortic dissection.
J Chin Med Assoc. **2019**, 82(3): 209-214.
- 668) Mafeld Sebastian, Annamalai Ganesan, Lindsay Thomas F, Zhong Iris, Tarulli Emidio, Mironov Oleg, Tan Kong-Teng. Initial Experience with Viabahn VBX as the Bridging Stent Graft for Branched and Fenestrated Endovascular Aneurysm Repair.
Vascular and endovascular surgery **2019**, 53(5): 395-400.
- 669) Gallitto E, Faggioli G, Pini R, Mascoli C, Sonetto A, Abualhin M, Loggiacco A, Ricco JB, Gargiulo M. First/Preliminary Experience of Gore Viabahn Balloon-Expandable Endoprosthesis as Bridging Stent in Fenestrated and Branched Endovascular Aortic Repair.
Ann Vasc Surg **2019**, 61: 299-309.
- 670) Fang Y, Si Y, Yang J, Yue J, Chen B, Zhu T, Fu W. Viabahn Open Revascularization Technique for Renal Artery Revascularization Reduces Renal Ischemia in Thoracoabdominal Aortic Aneurysm Hybrid Open-Endovascular Repair.
Ann Vasc Surg **2019**, 61: 261-269.
- 671) Tenorio ER, Karkkainen JM, Mendes BC, DeMartino RR, Macedo TA, Diderrich A, Hofer J, Oderich GS. Outcomes of directional branches using self-expandable or balloon-expandable stent grafts during endovascular repair of thoracoabdominal aortic aneurysms.
J Vasc Surg **2019**, S0741-5214(19), 32154-32158.
- 672) Buckley TS, Edwards JB, Johnson BL, Ottinger ME. Initial Experience with Gore VBX Balloon-Expandable Endoprosthesis for the Treatment of Acute Aortic Occlusion.
Am Surg **2019**; 85(9): e446-e448.
- 673) Besho JM, Tanaka A, Al-Rstum Z, Ray HM, Tjaden B, Saqib NU. Thoracic branched endograft for traumatic aortic pseudoaneurysm.
J Vasc Surg Cases Innov Tech **2019**, 5(4): 540-543.
- 674) Torsello GF, Beropoulis E, Munao R, Trimarchi S, Torsello GB, Austermann M. Outcomes of bridging stent grafts in fenestrated and branched endovascular aortic repair.
J Vasc Surg **2020**, 72(3): 859-865.

- 675) Motta F, Ezequiel PF, Knowles M, Crouner JR, Pascarella L, McGinagle KL, Marston WA, Kibbe MR, Ohana E, Farber MA. Performance of Viabahn balloon-expandable stent compared with self-expandable covered stents for branched endovascular aortic repair.
J Vasc Surg **2021**, 73(2): 410-416.
- 676) Torsello GB, Pitoulias A, Litterscheid S, Berekoven B, Torsello G-F, Austermann M, Bosiers MJ. Performance of the Gore VBX Balloon Expandable Endoprosthesis as Bridging Stent-Graft in Branched Endovascular Aortic Repair for Thoracoabdominal Aneurysms.
Journal of endovascular therapy: an official journal of the International Society of Endovascular Specialists **2021**, 28(4): 549-554.
- 677) Dake MD, Fischbein MP, Bavaria JE, Desai ND, Oderich G, Singh MJ, Fillinger M, Suckow BD, Matsumura JS, Patel HJ. Evaluation of the Gore TAG thoracic branch endoprosthesis in the treatment of proximal descending thoracic aortic aneurysms.
J Vasc Surg **2021**, 74(5): 1483-1490.e2.
- 678) Spinella G, Pane B, Finotello A, Bastianon M, Vera JMM, Gregorio SD, Pratesi G. Early Experience of Inner Branch Retrograde Cannulation With E-side Branch Stent Graft for Thoracoabdominal Aortic Aneurysms.
J Endovasc Ther **2023**, Apr 8. Epub ahead of print.
- 679) Miyayama S, Yamashiro M, Ikeda R, Yokka A, Komiya H, Sakuragawa N, Terada T, Yamamoto H. Stent Graft Placement for Injured Visceral Artery.
Interv Radiol **2023**, 8(3): 173-183.
- 680) Leone N, Bartolotti L A M, Baresi G F, Silingardi R, Resch T A, Gennai S. Anatomical Suitability for Branched Endovascular Aortic Arch Repair and Balloon Expandable Bridging Stent Grafts in a Cohort of Patients Previously Treated with Hybrid Approach.
J Vasc Surg **2024**, 79(2): 198-206.e15.

Case Reports

- 681) Yang SS. Hybrid repair of abdominal aortic aneurysm in a patient with poliomyelitis-related deformities.
J Vasc Surg **2018**, 67(3): 945-948.
- 682) Whitbeck MG. Treatment of focal distal abdominal aortic stenosis with the GORE VIABAHN VBX balloon expandable covered stent.
Catheter Cardiovasc Interventions **2020**, 95(3): 457-461.
- 683) Teixeira G, Matos A, de Almeida R, Lobato AC. Total Endovascular Aortic Arch Replacement with Chimney/Sandwich Techniques.
Ann Vasc Surg **2020**, 63, 456.e1-456.e4.
- 684) Myouchin K, Takayama K, Wada T, Taguchi H, Tanaka T, Kichikawa K. Treatment of Coral Reef Aorta by Endovascular VIABAHN VBX Balloon-Expandable Stent-Graft Placement.
Ann Vasc Dis **2021**, 14(3): 244-248.
- 685) Katsarou M, Auyang PL, Chinnadurai P, Bismuth J. "Octafen": A Noninvestigational Alternative Endograft Configuration for the Treatment of Thoracoabdominal Aortic Aneurysms.
J Endovasc Ther **2022**, Jul 22. Epub ahead of print.

- 686) Ono R, Watanabe M, Ueda H, Iwahana T, Kato H, Kubota Y, Matsumiya G, Kobayashi Y. Stent-Graft Placement for Radiation-Induced Abdominal Aortic Stenosis after Renal Autotransplantation.
Int Heart J **2023**, 64(2): 306-309.
- 687) Quaretti P, Corti R, D'Agostino A M, Bozzani A, Moramarco L P, Cionfoli N. Covered Stent Assisted Coil Embolization of Large Buhler Aneurysm in Setting of Chronic Celiac Trunk Occlusion.
CVIR Endovasc **2024**, 7(1): 9.

Clinical

Coronary Stenting

- 688) Emanuelsson H, van der Giessen WJ, Serruys PW. Benestent II: back to the future.
J Interv Cardiol **1994**, 7(6): 587-592.
- 689) Serruys P. A Progress Report from BENESTENT II: Heparin Coating, Restenosis and Cost-Effectiveness.
J Invasive Cardiol **1996**, 8 Suppl E: 22E-24E.
- 690) Serruys PW, Emanuelsson H, van der Giessen WJ, Lunn AC, Kiemeney F, Macaya C, Rutsch W, Heyndrickx G, Suryapranata H, Legrand V, Goy JJ, Materne P, Bonnier H, Morice MC, Fajadet J, Belardi J, Colombo A. Heparin-coated Palmaz-Schatz stents in human coronary arteries. Early outcome of the Benestent-II Pilot Study.
Circulation **1996**, 93(3): 412-422.
- 691) Williams DO. Dressing up the Palmaz-Schatz stent.
Circulation **1996**, 93(3): 400-402.
- 692) Stone GW, Brodie BR, Griffin JJ, Morice MC, Costantini C, St Goar FG, Overlie PA, Popma JJ, McDonnell J, Jones D, O'Neill WW, Grines CL. Prospective, multicenter study of the safety and feasibility of primary stenting in acute myocardial infarction: in-hospital and 30-day results of the PAMI stent pilot trial. Primary Angioplasty in Myocardial Infarction Stent Pilot Trial Investigator.
J Am Coll Cardiol **1998**, 31(1): 23-30.
- 693) van der Giessen WJ, van Beusekom HM, Eijgelshoven MH, Morel MA, Serruys PW. Heparin-coating of coronary stents.
Semin Interv Cardiol **1998**, 3(3-4): 173-176.
- 694) Serruys PW, van Hout B, Bonnier H, Legrand V, Garcia E, Macaya C, Sousa E, van der Giessen WJ, Colombo A, Seabra-Gomes R, Kiemeneij F, Ruygrok P, Ormiston J, Emanuelsson H. Randomised comparison of implantation of heparin-coated stents with balloon angioplasty in selected patients with coronary artery disease (Benestent II).
Lancet **1998**, 352(9129): 673-681.
- 695) Dzavik V, Carere RG, Teo KK, Knudtson ML, Marquis JF, Buller CE. An open design, multicentre, randomized trial of percutaneous transluminal coronary angioplasty versus stenting, with a heparin-coated stent, of totally occluded coronary arteries: rationale, trial design and baseline patient characteristics. Total O.
Can J Cardiol **1998**, 14(6): 825-832.

- 696) Serruys P, Grines C, Stone G, Garcia E, Kiemenev F, Morice M, Sousa J, Hamm C, Costantini C, Probst P, Rutsch W, Penn I, Fernandez-Aviles F, Vandormael M, Bartorelli A, Bilodeau L, Eijgelshoven M. Stent implantation in acute myocardial infarction using a heparin-coated stent: a pilot study as a preamble to a randomized trial comparing balloon angioplasty and stenting.
Int J Cardiovasc Intervent **1998**, 1(1): 19-27.
- 697) Buller CE, Dzavik V, Carere RG, Mancini GB, Barbeau G, Lazzam C, Anderson TJ, Knudtson ML, Marquis JF, Suzuki T, Cohen EA, Fox RS, Teo KK. Primary stenting versus balloon angioplasty in occluded coronary arteries: the Total Occlusion Study of Canada (TOSCA).
Circulation **1999**, 100(3): 236-242.
- 698) Grines CL, Cox DA, Stone GW, Garcia E, Mattos LA, Giambartolomei A, Brodie BR, Madonna O, Eijgelshoven M, Lansky AJ, O'Neill WW, Morice MC. Coronary angioplasty with or without stent implantation for acute myocardial infarction. Stent Primary Angioplasty in Myocardial Infarction Study Group.
N Engl J Med **1999**, 341(26): 1949-1956.
- 699) van der Giessen WJ. Heparin-Coated Coronary Stents.
Current Interventional Cardiology Reports **1999**, 1: 234-240.
- 700) Dzavik V, Carere RG, Mancini GB, Cohen EA, Catellier D, Anderson TE, Barbeau G, Lazzam C, Title LM, Berger PB, Labinaz M, Teo KK, Buller CE. Predictors of improvement in left ventricular function after percutaneous revascularization of occluded coronary arteries: a report from the Total Occlusion Study of Canada (TOSCA).
Am Heart J **2001**, 142(2): 301-308.
- 701) Berger PB, Dzavik V, Penn IM, Catellier D, Buller CE. Does ticlopidine reduce reocclusion and other adverse events after successful balloon angioplasty of occluded coronary arteries? Results from the Total Occlusion Study of Canada (TOSCA).
Am Heart J **2001**, 142(5): 776-781.
- 702) Kedev S, Guagliumi G, Valsechi O, Tespili M. Heparin-coated versus uncoated Palmaz-Schatz stent in native coronary circulation. A randomized study with blind angioscopic assessment.
Int J Artif Organs **2002**, 25(5): 461-469.
- 703) Mehran R, Aymong ED, Ashby DT, Fischell T, Whitworth H Jr, Siegel R, Thomas W, Wong SC, Narasimaiah R, Lansky AJ, Leon MB. Safety of an aspirin-alone regimen after intracoronary stenting with a heparin-coated stent: final results of the HOPE (HEPACOAT and an Antithrombotic Regimen of Aspirin Alone) study.
Circulation **2003**, 108(9): 1078-83.
- 704) Gurbel PA, Bliden KP. Platelet activation after stenting with heparin-coated versus noncoated stents.
Am Heart J **2003**, 146(4): E10.
- 705) Carrozza JP Jr. Preventing subacute stent thrombosis - is there a role for heparin-coated stents?
J Invasive Cardiol **2003**, 15(8): 442-443.

- 706) Ruygrok PN, Sim KH, Chan C, Rachman OJ, Adipranoto JD, Trisnohadi HB, Stewart JT, Ahmad N, Mak KH, Yusak M, Boestan I, Santoso T, Suryapranata H. Coronary intervention with a heparin-coated stent and aspirin only.
J Invasive Cardiol **2003**, 15(8): 439-441.
- 707) Cruz D, Karlsberg R, Takano Y, Vora D, Tobis J. Subacute stent thrombosis associated with a heparin-coated stent and heparin-induced thrombocytopenia.
Catheter Cardiovasc Interv **2003**, 58(1): 80-83.
- 708) Bittl JA. Heparin-coated stent and heparin-induced thrombocytopenia: true, true, and conceivably related.
Catheter Cardiovasc Interv **2003**, 58(1): 84-85.
- 709) Lev EI, Assali AR, Teplisky I, Rechavia E, Hasdai D, Sela O, Shor N, Battler A, Kornowski R. Comparison of outcomes up to six months of Heparin-Coated with noncoated stents after percutaneous coronary intervention for acute myocardial infarction.
Am J Cardiol **2004**, 93(6): 741-743.
- 710) Gupta V, Aravamuthan BR, Baskerville S, Smith SK, Gupta V, Lauer MA, Fischell TA. Reduction of subacute stent thrombosis (SAT) using heparin-coated stents in a large-scale, real-world registry.
J Invasive Cardiol **2004**, 16(6): 304-310.
- 711) Madduri J, Assali A, Solodky A, Teplizky I, Shor N, Battler A, Kornowski R. Acute and intermediate-term clinical outcomes following Heparin coated BX coronary stent implantation in patients with thrombus containing lesions.
Int J Cardiovasc Intervent **2004**, 6(2): 77-81.
- 712) Di Mario C, Mara S, Flavio A, Imad S, Antonio M, Anna P, Emanuela P, Stefano de S, Angelo R, Stefania C, Anna F, Carmelo C, Antonio C, Monzini N, Bonardi MA. Single vs multivessel treatment during primary angioplasty: results of the multicentre randomised HEpacoat for cuLPrit or multivessel stenting for Acute Myocardial Infarction (HELP AMI) Study.
Int J Cardiovasc Intervent **2004**, 6(3-4): 128-133.
- 713) Mehran R, Nikolsky E, Camenzind E, Zelizko M, Kranjec I, Seabra-Gomes R, Negoita M, Slack S, Lotan C. An Internet-based registry examining the efficacy of heparin coating in patients undergoing coronary stent implantation.
Am Heart J **2005**, 150(6): 1171-1176.
- 714) Sharma J, Kanei Y, Kwan TW. A case of giant coronary artery aneurysm after placement of a heparin-coated stent.
J Invasive Cardiol **2009**, 21(2): E22-23.
- 715) von Stempel C, Fayed H, Goode JA, Kalra S, Patel N. Viabahn stent graft in the management of a grade 3 coronary perforation.
CVIR Endovasc **2019**, 2(1): 6.

Clinical

Cardiac Surgical and Endovascular Repairs

- 716) Horer J, Cleuziou J, Kasnar-Samprec J, Schreiber. A Comparative Histopathological Study of Heparin Coated and Uncoated Polytetrafluoroethylene Shunts in Children with Congenital Heart Defect.
World J Pediatr Congenit Heart Surg **2014**, 5(3): 385-390.

- 717) Ashfaq A, Soroya MS, Iyengar A, Federman M, Reemtsen BL. Heparin-Coated Grafts Reduce Mortality in Pediatric Patients Receiving Systemic-to-Pulmonary Shunts. *Pediatr Cardiol* **2018**, 39(3): 473-477.
- 718) Systemic-to-pulmonary artery shunting using heparin-bonded grafts. Ambarsari YA, Purbojo A, Blumauer R, Glöckler M, Toka O, Cesnjevar RA, Ruffer A. *Interact Cardiovasc Thorac Surg* **2018**, 27(4): 591-597.

Case Reports

- 719) Weinstock BS, Haim YD. Pulmonary artery stenting in a patient with Takayasu's arteritis using a novel balloon-expandable covered stent. *SAGE Open Med Case Rep* **2019**, Apr 9, 7:2050313X19841955.
- 720) Chick JFB, Hussain J, Sherk W, Gemmete JJ, Srinivasa RN. Intraoperative Proximal Left Pulmonary Artery Injury during Thoracotomy Salvaged with VIABAHN VBX Balloon-Expandable Endoprosthesis. *J Vasc Interv Radiol* **2019**, May 30(5): 724-725.
- 721) Cole JM, Salavitabar A, Armstrong AK, Berman DP. Use of the Gore Viabahn VBX balloon-expandable endoprosthesis in the congenital heart disease population. *Catheter Cardiovasc Interventions* **2019**, 94(3): 416-421.

Clinical

Carotid Artery

- 722) Parkinson RJ, Demers CP, Adel JG, Levy EI, Sauvageau E, Hanel RA, Shaibani A, Guterman LR, Hopkins LN, Batjer HH, Bendok BR. Use of heparin-coated stents in neurovascular interventional procedures: preliminary experience with 10 patients. *Neurosurgery* **2006**, 59(4): 812-821, discussion 821.
- 723) Golarz SR, Gable D. Use of a Viabahn stent for repair of a common carotid artery pseudoaneurysm and dissection. *Ann Vasc Surg* **2010**, 24(4): 550.e11-3.
- 724) Elpiniki T, Salviato E, Rocca T, Braccini L, Galeotti R, Mascoli F. Heparin surface stent-graft for the treatment of a carotid pseudoaneurysm. *Ann Vasc Surg* **2010**, 24(7).
- 725) Nigro G, Gatta E, Pagliariccio G, Grilli C, Carbonari L. Use of the Gore Hybrid Vascular Graft in a challenging high-lying extracranial carotid artery aneurysm. *Journal of Vascular Surgery* **2014**, 59(3): 817-820.
- 726) Valenti D, Sayed S, Mistry H, Rashid H, Gambhir R, Slim H. Carotid bypass using the Gore Hybrid Vascular Graft as a rescue technique for on-table failed carotid endarterectomy. *J Vasc Surg* **2015**, S0741-5214(15): 1821-1822.
- 727) Hornung M, Franke J, Bertog SC, Gafoor S, Grunwald I, Sievert H. Initial Experience Using the Gore Embolic Filter in Carotid Interventions. *J Invasive Cardiol* **2016**, 28(8): 334-339.
- 728) Rivera-Chavarria IJ, Alvarado-Marin JC. Endovascular repair for an extracranial internal carotid aneurysm with cervical access: A case report. *Int J Surg Case Rep* **2016**, 19: 14-16.

- 729) Chiu Y, Hsu H, Lai S, Hsu C. Hybrid treatment of a carotid body tumor. *Interdisciplinary Neurosurgery: Advanced Techniques and Case Management* **2017**, 8: 75-77.
- 730) Schneider PA, Levy E, Bacharach JM, Metzger DC, Randall B, Garcia A, Siddiqui A, Schonholz C, Gray W. A First-in-Human Evaluation of a Novel Mesh-Covered Stent for Treatment of Carotid Stenosis in Patients at High Risk for Endarterectomy: 30-Day Results of the SCAFFOLD Trial. *JACC Cardiovasc Interv* **2018**, 11(23): 2396-2404.
- 731) Gray WA, Mehta M, Alani F, Kasirajan K, EMBOLDEN Clinical Study Investigators, Begg RJ, Bacharach JM, Soukas PA. Use of a novel embolic filter in carotid artery stenting: 30-Day results from the EMBOLDEN Clinical Study. *Catheter Cardiovasc Interventions* **2018**, 92(6): 1128-1135.
- 732) Quaglino S, Laurito A, Monti A, Maselli M, Manzo P, Sperti F, Tavolini V, Gaggiano A. Retrograde Use of Gore Hybrid Vascular Graft for a Complex Carotid Tandem Lesion. *Ann Vasc Surg* **2019**, 55(310): e5-310.e8.
- 733) Arens C, Granowski D, Udelnow A, Meyer F, Jechorek D, Halloul Z. Hybrid prosthesis for vascular reconstruction of the internal carotid artery near the skull base after radical excision of a very rare malignant glomus caroticum paraganglioma. (Article in German). *HNO* **2019**, 67(3): 207-211.
- 734) Gray WA, Levy E, Bacharach JM, Metzger DC, Randall B, Siddiqui A, Schonholz C, Alani F, Schneider PA. Evaluation of a novel mesh-covered stent for treatment of carotid stenosis in patients at high risk for endarterectomy: 1-year results of the SCAFFOLD trial. *Catheterization and cardiovascular interventions: official journal of the Society for Cardiac Angiography & Interventions* **2020**, 96(1): 121-127.
- 735) Wang K, Peng XX, Liu AF, Zhang YY, Lv J, Xiang L, Liu YE, Jiang WJ. Covered Stenting Is an Effective Option for Traumatic Carotid Pseudoaneurysm with Promising Long-Term Outcome. *J Korean Neurosurg Soc* **2020**, 63(5): 590-597.
- 736) Pinana C, Gramegna LL, Folleco E, Requena M, Hernandez D, Tomasello Weitz A. Preliminary Experience Using a Covered Stent Graft in Patients with Acute Ischemic Stroke and Carotid Tandem Lesion. *Cardiovasc Intervent Radiol* **2020**, 43(11): 1679-1686.
- 737) Liu C, Shen Y, Qian K, Hu Y, Hu X, Wu X. Application of covered stent graft in the treatment of complex carotid artery lesions: A single center experience. *Vascular* **2022**, 30(6): 1034-1043.

Case Reports

- 738) Schonholz C, Yamada R, Montgomery W, Brothers T, Guimaraes M. First-in-man implantation of a new hybrid carotid stent to prevent periprocedural neurological events during carotid artery stenting. *J Endovasc Ther* **2014**, 21(4): 601-604.
- 739) Yuan B, Xin H-N, Yuan K, Zhang J-L, Duan F, Wang M-Q. Heparin-bonded stent graft placement for treatment of massive epistaxis from ruptured radiation-induced internal carotid artery pseudoaneurysm: A case report. *Radiol Case Rep* **2022**, 17(6): 2129-2132.

- 740) Mukherjee D, Kittner J. Transcarotid artery revascularization in reverse for innominate artery stenosis.
Vascular **2023**, 31(4): 725-728.
- 741) Li W, Chen M, Zhang Y, Zhang H, Li C. A Clinical Series in Patients with Naso-Pharyngeal Cancer and Their Outcomes with Stent Graft Treatment for Sentinel Bleeding to Prevent Frank Carotid Rupture.
Ann Vasc Surg **2023**, 92:111-117.

Clinical

Other

- 742) Albertsson-Wikland K, Rosberg S. Analyses of 24-hour growth hormone profiles in children: relation to growth.
J Clin Endocrinol Metab **1988**, 67(3): 493-500.
- 743) Albertsson-Wikland K, Rosberg S, Libre E, Lundberg LO, Groth T. Growth hormone secretory rates in children as estimated by deconvolution analysis of 24-h plasma concentration profiles.
Am J Physiol **1989**, 257(6 Pt 1): E809-814.
- 744) Appelgren P, Ransjo U, Bindslev L, Larm O. Does surface heparinisation reduce bacterial colonisation of central venous catheters?
Lancet **1995**, 345(8942): 130.
- 745) Venkatesh B, Clutton-Brock TH, Hendry SP. Evaluation of the Paratrend 7 intravascular blood gas monitor during cardiac surgery: comparison with the C4000 in-line blood gas monitor during cardiopulmonary bypass.
J Cardiothorac Vasc Anesth **1995**, 9(4): 412-419.
- 746) Appelgren P, Ransjo U, Bindslev L, Espersen F, Larm O. Surface heparinization of central venous catheters reduces microbial colonization in vitro and in vivo: results from a prospective, randomized trial.
Crit Care Med **1996**, 24(9): 1482-1489.
- 747) Weiss IK, Fink S, Edmunds S, Harrison R, Donnelly K. Continuous arterial gas monitoring: initial experience with the Paratrend 7 in children.
Intensive Care Med **1996**, 22(12): 1414-1417.
- 748) Bagge E, Bengtsson BA, Carlsson L, Carlsson J. Low growth hormone secretion in patients with fibromyalgia - a preliminary report on 10 patients and 10 controls.
J Rheumatol JT **1998**, 25(1): 145-148.
- 749) Weiss IK, Fink S, Harrison R, Feldman JD, Brill JE. Clinical use of continuous arterial blood gas monitoring in the pediatric intensive care unit.
Pediatrics **1999**, 103(2): 440-445.
- 750) Cannavo S, Bartolone L, Lapa D, Venturino M, Almoto B, Violi A, Trimarchi F. Abnormalities of GH secretion in a young girl with Floating-Harbor syndrome.
J Endocrinol Invest **2002**, 25(1): 58-64.
- 751) Bridges C. New heparin coating reduces thrombosis and fibrin sheath formation in HD catheters.
Nephrol News Issues **2007**, 21(3): 32.

- 752) Kvarnstrom A, Schmidt A, Tylman M, Jacobsson M, Bengtsson A. Complement split products and proinflammatory cytokines in intraoperatively salvaged unwashed blood during hip replacement: comparison between heparin-coated and non-heparin-coated autotransfusion systems.
Vox Sang **2008**, 95(1): 33-38.
- 753) Clark TW, Jacobs D, Charles HW, Kovacs S, Aquino T, Erinjeri J, Benstein JA. Comparison of heparin-coated and conventional split-tip hemodialysis catheters.
Cardiovasc Intervent Radiol **2009**, 32(4): 703-706.
- 754) Jain G, Allon M, Saddekni S, Barker JF, Maya ID. Does heparin coating improve patency or reduce infection of tunneled dialysis catheters?
Clin J Am Soc Nephrol **2009**, 4(11): 1787-1790.

Review Articles

- 755) Olsson P, Larm O, Larsson R, Lins LE, Nilsson E, Swedenborg J. Requirements for thromboresistance of surface-heparinized materials.
Ann N Y Acad Sci **1983**, 416: 525-537.
- 756) Larsson R, Larm O, Olsson P. The search for thromboresistance using immobilized heparin.
Ann N Y Acad Sci **1987**, 516: 102-115.
- 757) Larm O, Larsson R, Olsson P. Surface-immobilized heparin.
In *Heparin: Chemical and Biological Properties, Clinical Applications*, Lane D, Lindahl U. Eds Edward Arnold Press **1989**, pp 597-608.
- 758) von Segesser LK, Weiss BM, Turina MI. Perfusion with heparin-coated equipment: potential for clinical use.
Semin Thorac Cardiovasc Surg **1990**, 2(4): 373-380.
- 759) Olsson P, Larm O. Biologically active heparin coating in medical devices.
Int J Artif Organs **1991**, 14(8): 453-456.
- 760) Mollnes TE, Videm V, Riesenfeld J, Garred P, Svennevig JL, Fosse E, Hogasen K, Harboe M. Complement activation and bioincompatibility. The terminal complement complex for evaluation and surface modification with heparin for improvement of biomaterials.
Clin Exp Immunol **1991**, 86 Suppl 1: 21-26.
- 761) von Segesser LK, Schilling J, Leskosek B, Marquardt K, Turina M. Surface treatments for perfusion devices.
Perfusion **1994**, 9(3): 197-205.
- 762) Riesenfeld J, Olsson P, Sanchez J, Mollnes TE. Surface modification with functionally active heparin.
Med Device Technol **1995**, 6(2): 24-31.
- 763) von Segesser LK. Heparin-bonded surfaces in extracorporeal membrane oxygenation for cardiac support.
Ann Thorac Surg **1996**, 61(1): 330-335, discussion 340-341.
- 764) Palmaz JC. New advances in endovascular technology.
Tex Heart Inst J **1997**, 24(3): 156-159.

- 765) Wendel HP, Ziemer G. Coating-techniques to improve the hemocompatibility of artificial devices used for extracorporeal circulation.
Eur J Cardiothorac Surg **1999**, 16(3): 342-350.
- 766) Kocsis JF, Llanos G, Holmer E. Heparin-coated stents.
J Long Term Eff Med Implants **2000**, 10(1-2): 19-45.
- 767) Olsson P, Sanchez J, Mollnes TE, Riesenfeld J. On the blood compatibility of end-point immobilized heparin.
J Biomater Sci Polym Ed **2000**, 11(11): 1261-1273.
- 768) Riesenfeld J, Scholander E. Heparin coating of medical devices.
In *Polymers for the Medical Industry*, 14th - 15th May, Rapra Technologies, Brussels, Belgium, **2001**, pp 1-4.
- 769) Reinhartz O, Stiller B, Eilers R, Farrar DJ. Current clinical status of pulsatile pediatric circulatory support.
ASAIO J **2002**, 48(5): 455-459.
- 770) Larsson R. Heparin-binding to improve biocompatibility.
Encycl Biomat Biomedical Eng Marcel Dekker **2005**.
- 771) Tanzi MC. Bioactive technologies for hemocompatibility.
Expert Review of Medical Devices **2005**, 2(4): 473-492.
- 772) Potapov EV, Stiller B, Hetzer R. Ventricular assist devices in children: current achievements and future perspectives.
Pediatr Transplant **2007**, 11(3): 241-255.
- 773) Sakariassen KS. Blood flow devices in medical research and clinical testing in humans: are we approaching personalized medicine?
Future cardiology **2007**, 3(1): 71-90.
- 774) Sakariassen KS. Thrombus formation and hyperplasia triggered by vascular stents implanted in man.
Int Rev of Thromb **2008**.
- 775) Pupka A, Janczak D, Szyber PP. The heparin-bonded ePTFE grafts in revascularisation of the lower limbs.
Polim Med **2010**, 40(1): 9-14.
- 776) Timms D. A review of clinical ventricular assist devices.
Med Eng Phys **2011**, 33: 1041-1047.
- 777) Mahmood S, Bilal H, Zaman M, Tang A. Is a fully heparin-bonded cardiopulmonary bypass circuit superior to a standard cardiopulmonary bypass circuit?
Interact Cardiovasc Thorac Surg **2012**, 14: 406-414.
- 778) Warkentin T. Heparin-Coated Intravascular Devices and Heparin-Induced Thrombocytopenia.
In *Heparin-Induced Thrombocytopenia*, Fifth Edition. **2012**: 573-590.
- 779) Shah PS, Shah N. Heparin-bonded catheters for prolonging the patency of central venous catheters in children.
Cochrane Database Syst Rev **2014**, Feb 25; (2).

- 780) Begovac PC, Pond D, Recknor J, Scholander E. Thromboresistant Vascular Graft. In *Drug-Device Combinations for Chronic Diseases* **2015**, 142-181.
- 781) Olsha O, Goldin I, Shemesh, D. Heparin-bonded expanded polytetrafluorethylene grafts in hemodialysis access. *J Vasc Access* **2016**, 17 Suppl 1: S79-84.
- 782) Madassery S, Turba UC, Arslan B. Role of Stent Grafts and Helical-Woven Bare-Metal Stents in the Superficial Femoral and Popliteal Arteries. *Tech Vasc Interv Radiol* **2016**, 19(2): 153-162.
- 783) Gomez LF, Peden EK. Description and early outcomes of the hybrid graft for dialysis. *J Vasc Access* **2017**, 6, 18(Suppl. 1): 64-67.
- 784) Biran R, Pond D. Heparin coatings for improving blood compatibility of medical devices. *Adv Drug Deliv Rev* **2017**, 112: 12-23.
- 785) Maeda K, Rosenthal DN, Reinhartz O. Ventricular Assist Devices for Neonates and Infants. *Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu* **2018**, 21: 9-14.
- 786) van Bakel TM, de Beaufort HW, Trimarchi S, Marrocco-Trischitta MM, Bismuth J, Moll FL, Patel HJ, van Herwaarden JA. Status of branched endovascular aortic arch repair. *Ann Cardiothorac Surg* **2018**, 7(3): 406-413.
- 787) Herman CR, Rosu C, Abraham CZ. Cerebral embolic protection during endovascular arch replacement. *Ann Cardiothorac Surg* **2018**, 7(3): 397-405.
- 788) Hajibandeh S, Hajibandeh S, Antoniou SA, Torella F, Antoniou GA. Treatment strategies for in-stent restenosis in peripheral arterial disease: a systematic review. *Interact Cardiovasc Thorac Surg* **2019**, 28(2): 253-261.
- 789) Rohde S, Antonides CFJ, Dalinghaus M, Muslem R, Bogers AJJC. Clinical outcomes of paediatric patients supported by the Berlin Heart EXCOR: a systematic review. *Eur J Cardiothorac Surg* **2019**, 1;56(5): 830-839.
- 790) Hetzer R, Javier MFDM, Javier Delmo EM. Pediatric ventricular assist devices: what are the key considerations and requirements? *Expert Rev Med Devices* **2020**, 17(1): 57-74.
- 791) Zoppo C T, Mocco J, Manning N W, Bogdanov, A A, Gounis M J. Surface Modification of Neurovascular Stents: From Bench to Patient. *J NeuroInterventional Surg* **2023**, Oct 4. Epub ahead of print.