

Best investigated DCB

Broadly studied across indications/clinical scenarios

SeQuent® Please NEO is continuously expanding its unique evidence-based position. Clinically proven, it offers new procedural options for the cardiologists in their daily cath lab routine as it has been investigated in a variety of indications and challenging patient populations such as:

In-stent restenosis

(1-27)

De novo lesions

(4, 6, 10, 14, 28-48)

Small vessel disease

(28, 31-33, 35-36, 39, 44, 49, 50-52)

Large vessel disease

(28, 34, 38, 40-43, 45)

Bifurcations

(4, 10, 15, 46-47, 53-59)

Acute coronary syndromes

(10. 51. 60-62)

STEMI

(10, 51, 63-64)

NSTEMI

(10, 51, 62, 65)

High bleeding risk

(38, 45, 66-67)

Diabetes mellitus

(8, 32, 51, 68-72)

Chronic kidney disease

(49)

Multivessel disease

(10, 68, 73)

Chronic total occlusion

(10, 74-79)

Elderly patients (>75 years)

(80)



SeQuent® Please NEO

Coronary drug coated balloon catheter



Non-exhaustive list of publicly available research articles regarding SeQuent* Please and SeQuent* Please NEO, based on literature search performed in June 2025.

Studies in the list are not necessarily sponsored by B.Braun.

References

- Pleva L et al. Comparing the Efficacy of Sirolimus and Paclitaxel-Eluting Balloon Catheters in the Treatment of Coronary In-Stent Restenosis: A Prospective Randomized Study (TIS 2 Study). Circ Cardiovase Interv. 2025 May;18(5):e014677.
- (2) Byrne RA et al. Randomized Trial of Biolimus DCB for In-Stent Restenosis: The Primary Results of the REFORM Study. JACC Cardiovasc Interv. 2025 Mar 10;18(5):654–62.
- (3) Liu H et al. Sirolimus- vs Paclitaxel-Coated Balloon for the Treatment of Coronary In-Stent Restnosis: The SIBLINT-ISR Randomized Trial. JACC Cardiovasc Interv. 2025 Apr 28;18(8):963-71.
- (4) Surunchupakorn P. 1 Year Outcome of Clinical Efficacy and Safety of Drug Coated Balloon Usage in Coronary Artery Disease in Thailand. Journal of The Department of Medical Services. 2024 Oct-Dec;49(4):91-8.
- (5) Hamm CW et al. A multicentre, randomised controlled clinical study of drug-coated balloons for the treatment of coronary in-stent restenosis. EuroIntervention. 2020 Jul 17:16(4):e328-34.
- (6) Bonaventura K et al. Systematic Scoring Balloon Lesion Preparation for Drug-Coated Balloon Angioplasty in Clinical Routine: Results of the PASSWORD Observational Study. Adv Ther. 2000 May:37(5):2210–23.
- (7) Aoki J et al. ELEGANT Investigators. Effect of combination of non-slip element balloon and drug-coating balloon for in-stent restenosis lesions (ELEGANT study). J Cardiol. 2019 Nov;74(5):436-42.
- (8) Nguyen VPT et al. Comparison of clinical outcomes of two different types of paclitaxel-coated balloons for treatment of patients with coronary in-stent restensis. Heart Vessels. 2019 Sep. 34(9):1420-8.
- (9) Ali RM et al. Treatment of Coronary Drug-Eluting Stent Restenosis by a Sirolimus- or Paclitaxel-Coated Balloon. JACC Cardiovasc Interv. 2019 Mar 25:12(6):558-66.
- (10) Rosenberg M et al. Prospective, large-scale multicenter trial for the use of drug-coated balloons in coronary lesions: The DCB-only All-Comers Registry. Catheter Cardiovasc Intery. 2019 Feb 1:93(2):181-8
- (11) Merat B et al. Can you score with balloons to enhance outcomes after drug coated balloon angioplasty? Insights from the Paris DCB Registry for in-stent restenosis. J Interv Cardiol. 2018 Jun;31(3):353-9.
- (12) Wong YTA et al. Comparison of drug-eluting stents and drug-coated balloon for the treatment of drug-eluting coronary stent restenosis: A randomized RESTORE trial. Am Heart J. 2018. Mar; 197:35-42.
- (13) Baan J Jr et al. A Randomized Comparison of Paclitaxel-Eluting Balloon Versus Everolimus-Eluting Stent for the Treatment of Any In-Stent Restenosis: The DARE Trial. JACC Cardiovasc. Interv. 2018 Feb 12;11(3):275–83.
- (14) Hee L et al. Late clinical outcomes for SeQuent please paclitaxel-coated balloons in PCI of instent restenosis and de novo lesions: A single-center, real world registry, Catheter Cardiovasc Interv. 2017 Feb 15;89(3):375–82
- (15) Habara S et al. Paclitaxel-coated balloon catheter compared with drug-eluting stent for drug-eluting stent restenosis in routine clinical practice. EuroIntervention. 2016 Feb;11(10):1098-105.
- (16) Lee WC et al. Associations Between Target Lesion Restenosis and Drug-Fluting Balloon Use: An Observational Study. Medicine (Baltimore). 2016 Jan 95(3):e2559.
- (17) Unverdorben M et al. Paclitaxel-coated balloon catheter versus paclitaxel-coated stent for the treatment of coronary in-stent restenosis: the three-year results of the PEPCAD II ISR study. EuroIntervention. 2015 Dec;11(8):2926-34.
- (18) Auffret V et al. Treatment of drug-eluting stents in-stent restenosis with paclitaxel-coated balloon angioplasty. Insights from the French "real-world" prospective GARO Registry. Int J Cardiol. 2016 Jan 15;203:690-6.

- (19) Habara S et al. Late Restenosis After Paclitaxel-Coated Balloon Angioplasty Occurs in Patients With Drug-Eluting Stent Restenosis. J Am Coll Cardiol. 2015 Jul 7:66(1):14-22.
- (20) Adriaenssens T et al. Optical coherence tomography study of healing characteristics of paclitaxel-eluting balloons vs. everolimus-eluting stents for in-stent restenosis: the SEDUCE (Safety and Efficacy of a Drug elUting balloon in Coronary artery rEstenosis) randomised clinical trial. EuroIntervention. 2014 Aug; 10(4):439–48.
- (21) Habara S et al. A multicenter randomized comparison of paclitaxel-coated balloon catheter with conventional balloon angioplasty in patients with bare-metal stent restenosis and drug-eluting stent restenosis. Am Heart J. 2013 Sep;166(3):527-33.
- (22) Byrne RA et al. ISAR-DESIRE 3 investigators. Paclitaxel-eluting balloons, paclitaxel-eluting stents, and balloon angioplasty in patients with restenosis after implantation of a drug-eluting stent (ISAR-DESIRE 3): a randomised, open-label trial. Lancet. 2013 Feb 9;381(9865):461-7.
- (23) Rittger H et al. A randomized, multicenter, single-blinded trial comparing paclitaxel-coated balloon angioplasty with plain balloon angioplasty in drug-eluting stent restenosis: the PEPCAD-DES study. J Am Coll Cardiol. 2012 Apr 10-59(15):1377-82
- (24) Scheller B et al. Long-term follow-up after treatment of coronary in-stent restenosis with a paclitaxel-coated balloon catheter. JACC Cardiovasc Interv. 2012 Mar;5(3):323-30.
- (25) Unverdorben M et al. Paclitaxel-coated balloon catheter versus paclitaxel-coated stent for the treatment of coronary in-stent restenosis. Circulation. 2009 Jun 16:119(23):2986-94.
- (26) Scheller B et al. Two year follow-up after treatment of coronary in-stent restenosis with a paclitaxel-coated balloon catheter. Clin Res Cardiol. 2008 Oct:97(10):773-81.
- (27) Scheller B et al. Treatment of coronary in-stent restenosis with a paclitaxel-coated balloon catheter. N Engl J Med. 2006 Nov 16;355(20):2113-24.
- (28) Refaat H et al. Efficacy and long-term outcomes of drug coated balloon in de novo lesions of small versus large coronary vessels. Indian Heart J. 2025 May-Jun;77(3):174-81.
- (29) Shin ES et al. A Prospective Randomized Trial Comparing 2 Different Paclitaxel-Coated Balloons in De Novo Coronary Artery Disease. JACC Asia. 2025 Jan 7;5(1):15–24.
- (30) Lee T et al. Predictors of target lesion failure after percutaneous coronary intervention with a drug-coated balloon for de novo lesions. EuroIntervention. 2024 Jul 1;20(13):e818-25.
- (31) Ninomiya K et al. A Prospective Randomized Trial Comparing Sirolimus-Coated Balloon With Paclitaxel-Coated Balloon in De Novo Small Vessels. JACC Cardiovasc Interv. 2023 Dec 11:16(23):2884-96.
- (32) Seeger J et al. On Behalf Of The Basket-Small Investigators. Impact of Insulin-Treated Compared to Non-Insulin-Treated Diabetes Mellitus on Outcome of Percutaneous Coronary Intervention with Drug-Coated Balloons versus Drug-Eluting Stents in De Novo Coronary Artery Disease: The Randomized BASKET-SMALL 2 Trial. J Cardiovasc Dev Dis. 2023 Mar 13:10(3):119.
- (33) Qian J et al. PEPCAD China SVD study. Drug-coated balloon for the treatment of small vessel disease: 9 months of angiographic results and 12 months of clinical outcomes of the PEPCAD China SVD study. Catheter Cardiovasc Interv. 2023 Jan;101(1):33-43.
- (34) Yu X et al. A Non-inferiority, Randomized Clinical Trial Comparing Paclitaxel-Coated Balloon Versus New-Generation Drug-Eluting Stents on Angiographic Outcomes for Coronary De Novo Lesions. Cardiovasc Drugs Ther. 2022 Aug;36(4):655-64.
- (35) Farah A et al. Efficacy and safety of drug-coated balloons according to coronary vessel size. A report from the BASKET-SMALL 2 trial. Postepy Kardiol Interwencyinej. 2022 Jun; 18(2):122-30.
- (36) Jeger RV et al. BASKET-SMALL 2 Investigators. Long-term efficacy and safety of drug-coated balloons versus drug-eluting stents for small coronary artery disease (BASKET-SMALL 2): 3-year follow-up of a randomised, non-inferiority trial. Lancet. 2020 Nov 7;396(10261):1504-10.
- (37) Merinopoulos I et al. Day case discharge of patients treated with drug coated balloon only angioplasty for de novo coronary artery disease: A single center experience. Catheter Cardiovasc Interv. 2020 Jan;95(1):105–8.

- (38) Rissanen TT et al. DEBUT trial investigators. Drug-coated balloon for treatment of de-novo coronary artery lesions in patients with high bleeding risk (DEBUT): a single-blind, randomised, non-inferiority trial. Lancet. 2019 Jul 20;394(10194):230-39. Erratum in: Lancet. 2019 Jul 20;394(10194):218.
- (39) Jeger RV et al. BASKET-SMALL 2 Investigators. Drug-coated balloons for small coronary artery disease (BASKET-SMALL 2): an open-label randomised non-inferiority trial. Lancet. 2018 Sep 8;392(10150):849-56.
- (40) Liu Y et al. 12-Month clinical results of drug-coated balloons for de novo coronary lesion in vessels exceeding 3.0 mm. Int J Cardiovasc Imaging. 2019 Apr;35(4):579-86.
- (41) Yu X et al. Treatment of large de novo coronary lesions with paclitaxelcoated balloon only: results from a Chinese institute. Clin Res Cardiol. 2019 Mar:108(3):234–45.
- (42) Rosenberg M et al. Drug Coated Balloon-Only Strategy in De Novo Lesions of Large Coronary Vessels. J Interv Cardiol. 2019 Feb 3;2019:6548696.
- (43) Lu W et al. Short-term outcomes from drug-coated balloon for coronary de novo lesions in large vessels. J Cardiol. 2019 Feb;73(2):151–5.
- (44) Venetsanos D et al. Long-term efficacy of drug coated balloons compared with new generation drug-eluting stents for the treatment of de novo coronary artery lesions. Catheter Cardiovasc Interv. 2018 Nov 1;92(5):E317-26.
- (45) Rissanen TT et al. Percutaneous Coronary Intervention of Complex Calcified Lesions With Drug-Coated Balloon After Rotational Atherectomy. J Interv Cardiol. 2017 Apr;30(2):139-46.
- (46) Bruch L et al. Results From the International Drug Coated Balloon Registry for the Treatment of Bifurcations. Can a Bifurcation Be Treated Without Stents? J Interv Cardiol. 2016 Aug;29(4):348–56.
- (47) Schulz A et al. Treatment of coronary de novo bifurcation lesions with DCB only strategy. Clin Res Cardiol. 2014 Jun;103(6):451-6
- (48) Unverdorben M et al. Treatment of small coronary arteries with a paclitaxel-coated balloon catheter. Clin Res Cardiol. 2010 Mar;99(3):165-74.
- (49) Mahfoud F et al. Drug-coated balloons for small coronary artery disease in patients with chronic kidney disease: a pre-specified analysis of the BASKET-SMALL 2 trial. Clin Res Cardiol. 2022 Jul;111(7):806–15.
- (50) Funatsu A et al. A multicenter randomized comparison of paclitaxel-coated balloon with plain balloon angioplasty in patients with small vessel disease. Clin Res Cardiol. 2017 Oct;106(10):824-32.
- (51) Sinaga DA et al. Drug-Coated Balloons: A Safe and Effective Alternative to Drug-Eluting Stents in Small Vessel Coronary Artery Disease. J Interv Cardiol. 2016 0et;29(5):454-60.
- (52) Zeymer U et al. Prospective 'real world' registry for the use of the 'PCB only' strategy in small vessel de novo lesions. Heart. 2014 Feb;100(4):311-6.
- (53) Gao X et al. Drug-Coated Balloon Angioplasty of the Side Branch During Provisional Stenting: The Multicenter Randomized DCB-BIF Trial. J Am Coll Cardiol. 2025 Jan 7:86(1):1-15.
- (54) Ke D et al. Randomized Pilot Study to Compare DCB-Based versus DST-Based Strategies for the Treatment of True or Complex Coronary Bifurcation Lesions. Rev Cardiovasc Med. 2023 Mar 23;24(4):99.
- (55) Kleber FX et al. Drug eluting balloons as stand alone procedure for coronary bifurcational lesions: results of the randomized multicenter PEPCAD-BIF trial Clin Res Cardiol. 2016 Jul 1505/15613-21.
- (56) Her AY et al. Serial Morphological Changes of Side-Branch Ostium after Paclitaxel-Coated Balloon Treatment of De Novo Coronary Lesions of Main Vessels. Yonsei Med J. 2016 May;57(3):606-13.
- (57) López Minguez JR et al. A prospective randomised study of the paclitaxel-coated balloon catheter in bifurcated coronary lesions (BABILON trial): 24-month clinical and angiographic results. EuroIntervention. 2014 May;10(1):50-7.
- (58) Herrador JA et al. Drug-eluting vs. conventional balloon for side branch dilation in coronary bifurcations treated by provisional T stenting. J Interv Cardiol. 2013 Oct;26(5):454-62.
- (59) Mathey DG et al. Treatment of bifurcation lesions with a drug-eluting balloon: the PEPCAD V (Paclitaxel Eluting PTCA Balloon in Coronary Artery Disease) trial. EuroIntervention. 2011 May:7 Suppl K:K61-5.

- (60) Takahashi T et al. J-PCI Registry Investigators. Successful or Uncomplicated Use of Drug-Coated Balloon Versus Drug-Eluting Stent Strategies for De Novo Culprit Lesions in Acute Coronary Syndromes: Insights from a Nationwide Registry in Japan. J Am Heart Assoc. 2025 Jun 3;14(11):e038071.
- (61) Mangner N et al. Safety and Efficacy of Drug-Coated Balloons Versus Drug-Eluting Stems in Acute Coronary Syndromes: A Prespecified Analysis of BASKET-SMALL 2. Circ Cardiovasc Interv. 2022 Feb:15(2):e011325.
- (62) Besic KM et al. Drug-eluting balloons in patients with non-ST elevation acute coronary syndrome. J Cardiol. 2015 Mar;65(3):203-7.
- (63) Merinopoulos I et al. Assessment of Paclitaxel Drug-Coated Balloon Only Angioplasty in STEMI, JACC Cardiovasc Intery, 2023 Apr 10:16(7):771-9.
- (64) Gobić D et al. Drug-Coated Balloon Versus Drug-Eluting Stent in Primary Percutaneous Coronary Intervention: A Feasibility Study. Am J Med Sci. 2017 Dec;354(6):553-60.
- (65) Scheller B et al. Bare metal or drug-eluting stent versus drug-coated balloon in non-ST-elevation myocardial infarction: the randomised PEPCAD NSTEMI trial. EuroIntervention. 2020 Apr 17;15(17):1527-33.
- (66) Scheller B et al. Drug-Coated Balloon for Small Coronary Artery Disease in Patients With and Without High-Bleeding Risk in the BASKET-SMALL 2 Trial. Circ Cardiovasc Interv. 2022 Apr;15(4):e011569.
- (67) Shin ES et al. Prospective randomized trial of paclitaxel-coated balloon versus bare-metal stent in high bleeding risk patients with de novo coronary artery lesions. Coron Artery Dis. 2019 Sep;30(6):425-31.
- (68) Her AY et al. Drug-coated balloon-based versus drug-eluting stent-only revascularization in patients with disetees and multivessel coronary artery disease. Cardiovasc Diabetol. 2023 May 20;22(1):120.
- (69) Wöhrle J et al. Impact of Diabetes on Outcome With Drug-Coated Balloons Versus Drug-Eluting Stents: The BASKET-SMALL 2 Trial. JACC Cardiovasc Interv. 2021 Aug 23;14(16):1789-98.
- (70) Claessen BE et al. Paclitaxel-eluting balloon versus everolimus-eluting stent in patients with diabetes mellitus and in-stent restenosis: Insights from the randomized DARE trial. Catheter Cardiovasc Interv. 2019 Feb 1;93(2):216-21.
- (71) Xu B et al. A prospective, multicenter, randomized trial of paclitaxel-coated balloon versus paclitaxel-eluting stent for the treatment of drug-eluting stent in-stent restenois: results from the PEPCAD China ISR trial. JACC Cardiovasc Interv. 2014 Feb; 7(2):204-11
- (72) Ali RM et al. Paclitaxel-eluting balloon angioplasty and cobalt-chromium stents versus conventional angioplasty and paclitaxel-eluting stents in the treatment of native coronary artery stenoses in patients with diabetes mellitus. EuroIntervention. 2011 May;7 Suppl K:R83-92.
- (73) Shin ES et al. Clinical Impact of Drug-Coated Balloon-Based Percutaneous Coronary Intervention in Patients With Multivessel Coronary Artery Disease. JACC Cardiovasc Interv. 2023 Feb 13:16(3):292-9.
- (74) Madanchi M et al. Outcomes following coronary chronic total occlusion revascularization with drug-coated balloons. J Invasive Cardiol. 2024 Mar;36(3).
- (75) Wang X et al. Long-term outcomes of less drug-eluting stents by the use of drug-coated balloons in de novo coronary chronic total occlusion intervention: A multicenter observational study. Front Cardiovasc Med. 2023 Mar 3:10:1045859.
- (76) Terashita K et al. Intraplaque wiring enables drug-coated balloons to be utilized for percutaneous recanalization of chronically occluded coronary arteries. Catheter Cardiovasc Interv. 2023 Mar;101(4):764-72.
- (77) Jun EJ et al. Clinical Outcomes of Drug-Coated Balloon Treatment After Successful Revascularization of de novo Chronic Total Occlusions. Front Cardiovasc Med. 2022 Apr. 13-9:821380
- (78) Köln PJ et al. Treatment of chronic total occlusions in native coronary arteries by drug-coated balloons without stenting - A feasibility and safety study. Int J Cardiol. 2016 Dec 15;225:262-7.
- (79) Wöhrle J Werner GS. Paclitaxel-coated balloon with bare-metal stenting in patients with chronic total occlusions in native coronary arteries. Catheter Cardiovasc Interv. 2013 Apr;81(5):793-9.
- (80) Shin et al. Clinical impact of drug-coated balloon treatment of coronary artery disease in elderly patients. J Geriatr Cardiol. 2025 Jan 28;22(1):150-8.