



**Subject:** Intracoronary Brachytherapy for In-Stent Restenosis\*

**Effective Date:** July 5, 2001

**Department(s):** Utilization Management

---

**Policy:** Coronary artery brachytherapy for in-stent restenosis is reimbursable under Plans administered by QualCare, Inc.

**Objective:** To ensure proper and consistent reimbursement and to record criteria for a specific therapeutic intervention.

**Procedure:**

- A. Coronary artery brachytherapy (**CPT 77770-77772, 92974**) will be reimbursed for in-stent restenosis (**ICD-9 996.03, 996.72; ICD-10 T82.218A, T82.817A-T82.9XXa**) in either a native coronary artery or a vein-grafted coronary artery.
- B. Coronary artery brachytherapy is **NOT** reimbursable for primary prevention of restenosis during initial stent placement (**92928-92944**).

**References:**

Siontis GC, Stefanini GG, Mavridis D, Siontis KC, et al. Percutaneous coronary interventional strategies for treatment of in-stent restenosis: a network meta-analysis. *Lancet*. 2015;386(9994):655-64(Aug)

Lu YG, Chen YM, Li L, Zhao RZ, Fu CH, Yan H. Drug-eluting stents vs. intracoronary brachytherapy for in-stent restenosis: a meta-analysis. *Clin Cardiol*. 2011;34(6):344-51.(Jun) doi: 10.1002/clc.20900. Epub 2011 Apr 27.

Scheile TM, Herbst J, et al . Late and very late catch-up after (90)Sr/(90)Y beta- irradiation for the treatment of coronary in-stent restenosis. *Acute Card Care* 2011;13(1):9-13(Mar).

Weimer M, Konig A, et al. Sirolimus eluting stent implantation versus beta-irradiation for the treatment of in-stent restenotic lesion: clinical and ultrasound results from a randomized trial. *Eurointervention* 2011;6(6):687-94(Jan).

Vlachojannis GJ, Fichtlscherer S, et al. Intracoronary beta-radiation therapy for in-stent restenosis: long-term success rate and prediction of failure. *J Interv Cardiol* 2010;23(1):60-5(Feb)

Xiong-jie LI, Seung-Woon Rha, et al. Vascular brachytherapy revisited for in-stent restenosis in the drug-eluting stent era: current status and future perspective. *Chinese Medical Journal* 2009;122(18):2174-79.

Oliver LN, Buttner PG, Hobson H, Golledge J. A meta-analysis of randomized controlled trials assessing drug-eluting stents and vascular brachytherapy in the treatment of coronary artery in-stent restenosis. *Int J Cardiol* 2008;126(2):216-23 (May)

Ferrero V, Ribichini F, Piessens M, et al. Intracoronary  $\beta$ -irradiation for the treatment of de novo lesions: 5-Year clinical follow-up of the BetAce randomized trial. *Am Heart J* 2007;153(3):398-402 (Mar)

Zavalloni D, Belli G, Rossi M, et al. Comparison between drug-eluting stents and beta-radiation for the treatment of diffuse in-stent restenosis: Clinical and angiographic outcomes. *Am Heart J* 2006;152(5):908e1-908e7 (Nov)

Mishra S, Wolfram R, Torguson R, et al. Comparison of Effectiveness and Safety of Drug-Eluting Stents Versus Vascular Brachytherapy for Saphenous Vein Graft In-Stent Restenosis. *Am J Cardiol* 2006;97(9):1303-1307 (May 1)

Feres F, Muñoz JS, Abizaid A, et al. Comparison between sirolimus-eluting stents and intracoronary catheter-based beta radiation for the treatment of in-stent restenosis. *Am J Cardiol* 2005;96(12):1656-1662 (Dec 15)

Torguson R, Sabate M, Deible R, et al. Intravascular Brachytherapy Versus Drug-Eluting Stents for the Treatment of Patients with Drug-Eluting Stent Restenosis. *Am J Cardiol* 2006;98(10):1340-1344 (Nov 15)

Eng TY, Boersma MK, Fuller CD, et al. The Role of Radiation Therapy in Benign Diseases. *Hematol Oncol Clin N Am* 2006;20(2):523-527 (Apr)

Silber S, Popma JJ, Suntharalingam M, et al. Two-year clinical follow-up of  $^{90}\text{Sr}/^{90}\text{Y}$   $\beta$ -radiation versus placebo control for the treatment of in-stent restenosis. *Am Heart J* 2005;149(4):689-694 (Apr)

Leon MB et al. Localized Intracoronary Gamma-Radiation Therapy to Inhibit the Recurrence of Restenosis after Stenting. *N Eng J Med*. 2001;344:250-6 (January 25)

Sheppard R, Eisenberg MJ. Intracoronary Radiotherapy for Restenosis (editorial) *N Eng J Med* 2001;344:295-297 (January 25)

Ahmed JM, Mintz GS, Waksman R, et al. Serial intravascular ultrasound analysis of edge recurrence after intracoronary gamma radiation treatment of native artery in-stent restenosis lesions. *Am J Cardiol* 2001;87(10):1145-9 (May 15)

Drafted By/Date: P.Zevin, MD 06/26/01

Approved By/Date: UM Committee 7/5/01

Revised By/Date: B.Fisher, MD 01/08/02

Approved By/Date: QM Committee 1/29/02

Revised By/Date: B.Fisher, MD 06/27/07

Approved By/Date: QM Committee 07/31/07

Revised By/Date: B.Fisher, MD 02/02/09

Approved By/Date: QM Committee 02/24/09

Revised By/Date: M.McNeil, MD 04/06/11

Approved By/Date: QM Committee 05/10/11

Reviewed w/o Revision By/Date: M.McNeil, MD 04/24/13

Approved By/Date: QM Committee 5/14/13

Revised By/Date: M.McNeil, MD 05/31/16

Approved By/Date: QM Committee 6/21/16

\*Consistent with Summary Plan Description (SPD). When there is discordance between this policy and the SPD, the provisions of the SPD prevail.