

### Best Evidence Database Example – Therapeutic Study

Vermeersch P, Agostoni P, Verheye S, Van den Heuvel P, Convens C, Bruining N, Van den Branden F, Van Langenhove G

**Randomized double-blind comparison of sirolimus-eluting stent versus bare-metal stent implantation in diseased saphenous vein grafts: six-month angiographic, intravascular ultrasound, and clinical follow-up of the RRISC Trial**  
 J Am Coll Cardiol, 2006;(48)12:2423-2431

**Medline Link:**

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=17174178&query\\_hl=17&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17174178&query_hl=17&itool=pubmed_docsum)

<b>Study Type:</b> Therapy	<b>Study Design:</b> Randomized controlled trial	<b>Class of Evidence:</b> I-II
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**PURPOSE:**

To compare, in a randomized fashion, sirolimus-eluting stents (SES) versus bare-metal stents (BMS) in saphenous vein grafts (SVGs).

<b>P</b>	<b>Patients</b>	Diseased saphenous vein grafts (N=75; patients with 96 lesions in 80 grafts)
<b>I</b>	<b>Intervention</b>	Sirolimus-eluting stents (n=38; patients received 60 SES for 47 lesions)
<b>C</b>	<b>Comparison</b>	Bare-metal stents (n=37; patients received 54 BMS for 49 lesions)
<b>O</b>	<b>Outcome</b>	Restenosis, major adverse clinical events (death, myocardial infarction, target lesion, and vessel revascularization).
	<b>Results</b>	<ul style="list-style-type: none"> <li>• In-stent late loss was significantly reduced in SES (0.38 +/- 0.51 mm vs. 0.79 +/- 0.66 mm in BMS, p = 0.001)</li> <li>• Binary in-stent and in-segment restenosis were reduced, 11.3% versus 30.6% (relative risk [RR] 0.37; 95% confidence interval [CI] 0.15 to 0.97, p = 0.024) and 13.6% versus 32.6% (RR 0.42; 95% CI 0.18 to 0.97, p = 0.031), respectively</li> <li>• Median neointimal volume was 1 mm(3) (interquartile range 0 to 13) in SES versus 24 (interquartile range 8 to 34) in BMS (p &lt; 0.001)</li> <li>• Target lesion and vessel revascularization rates were significantly reduced, 5.3% versus 21.6% (RR 0.24; 95% CI 0.05 to 1.0, p = 0.047) and 5.3% versus 27% (RR 0.19; 95% CI 0.05 to 0.83, p = 0.012), respectively</li> <li>• Death and myocardial infarction rates were not different</li> </ul>

**CONCLUSION:**

Sirolimus-eluting stents significantly reduce late loss in SVG as opposed to BMS. This is associated with a reduction in restenosis rate and repeated target lesion and vessel revascularization procedures.

**Best Evidence Database Example – Prognostic Study (CoE I)**

Fausto A, Bongiovanni M, Cicconi P, Menicagli L, Ligabo EV, Melzi S, Bini T, Sardanelli F, Cornalba G, Monforte A.

**Potential predictive factors of osteoporosis in HIV-positive subjects**

Bone, 2006;(38)6:893-897

**Medline Link:**

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=16377270&query\\_hl=15&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16377270&query_hl=15&itool=pubmed_DocSum)

<b>Study Type:</b> Prognosis	<b>Study Design:</b> Cohort	<b>Class of Evidence:</b> I
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**PURPOSE:**

To determine if HIV is associated with the occurrence of osteopenia/osteoporosis.

<b>P</b>	<b>Patients</b>	Naive and HAART-treated HIV infected outpatients (N=161, age 30-50 years)
<b>P</b>	<b>Prognostic factors</b>	Female gender, older age, low body mass index, higher HIV-RNA levels, use of HAART
<b>O</b>	<b>Outcome</b>	Osteopenia/osteoporosis
	<b>Results</b>	<ul style="list-style-type: none"> <li>• Independent predictors of osteopenia/osteoporosis were:                             <ul style="list-style-type: none"> <li>○ Female gender (OR: 3.02, 95% CI: 1.26-7.25, P = 0.01 vs. male)</li> <li>○ Older age (OR: 1.10, 95% CI: 1.01-1.20, P = 0.03, for each additional year)</li> <li>○ Low body mass index (OR: 0.78, 95% CI: 0.68-0.91, P = 0.001 for each additional unit)</li> <li>○ Higher HIV-RNA levels at DEXA (OR: 1.97, 95% CI: 1.16-3.34, P = 0.01 for each additional Log (10))</li> </ul> </li> <li>• The use of HAART (OR: 2.61, 95% CI: 0.66-10.27, P = 0.17 vs. naive) and the alterations of markers of bone metabolism were not significantly related to osteopenia/osteoporosis</li> </ul>

**CONCLUSION:**

HIV-infected subjects have a high frequency of osteopenia/osteoporosis. Traditional risk factors are predictive of osteopenia/osteoporosis also in HIV-subjects; the association with higher HIV-RNA levels can suggest a direct role of HIV itself in the occurrence of bone disease.

**Best Evidence Database Example – Prognostic Study (CoE IV)**

Lorentzon M, Mellstrom D, Haug E, Ohlsson C

**Smoking is associated with lower bone mineral density and reduced cortical thickness in young men**

J Clin Endocrinol Metab, 2007;(92)2:497-503

**Medline Link:**

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=17077132&query\\_hl=10&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17077132&query_hl=10&itool=pubmed_docsum)

<b>Study Type:</b> Prognosis	<b>Study Design:</b> Case series	<b>Class of Evidence:</b> IV
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**PURPOSE:**

To determine whether smoking was associated with areal bone mineral density (aBMD) or volumetric BMD (vBMD) and bone size in young men.

<b>P</b>	<b>Patients</b>	Population-based Gothenburg Osteoporosis and Obesity Determinants (GOOD) study (N=1068, 100% male, mean age 19 years)
<b>P</b>	<b>Prognostic factors</b>	Smoking
<b>O</b>	<b>Outcome</b>	Bone parameters, serum sex hormone levels
	<b>Results</b>	<ul style="list-style-type: none"> <li>Smokers had significantly lower aBMD (dual x-ray absorptiometry) of the total body (crude: -2.1%; adjusted for age, height, weight, calcium intake, and physical activity: -1.8%), lumbar spine (crude: -4.3%; adjusted: -3.3%), and trochanter (crude: -6.6%; adjusted: -5.0%) than nonsmokers</li> <li>Smokers had lower cortical thickness of both the radius (crude: -2.8%; adjusted: -2.9%) and tibia (crude: -4.5%; adjusted: -4.0%) than the nonsmokers, whereas no difference was seen for cortical vBMD</li> <li>Smokers had higher serum levels of total and free testosterone and lower 25-OH-vitamin D than nonsmokers</li> </ul>

**CONCLUSION:**

Smoking was associated with lower aBMD and reduced cortical thickness in young men.