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INTRAVASCULAR ULTRASOUND-GUIDED CORONARY STENTING OF ANGIOGRAPHIC SMALL VESSELS (LESS-THAN-3.0 MM)

### Permalink

<https://escholarship.org/uc/item/34g7627h>

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### Publication Date

1994

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Peer reviewed

874-35

**Intravascular Ultrasound Guided Coronary Stenting of Angiographic Small Vessels (<3.0 mm)**

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Intravascular ultrasound (IVUS) guided coronary stenting was performed in 50 pts (52 lesions) with a proximal angiographic reference vessel diameter of <3.0 mm. The vessel distribution was: 38 LAD (73%), 9 Circ/OM (17%), 3 RCA (6%), and 2 Ramus Intermediate (4%). Stents were successfully deployed in 49 pts (98%). One pt (2%) had an emergency bypass operation. Indications for stenting were 63% elective, 16% restenosis, 16% suboptimal PTCA result, 6% post-opening a chronic total occlusion. A total of 71 stents were deployed. Multiple stents were deployed in 20 pts (39%). Optimal IVUS guided stent expansion (according to predefined criteria) was achieved in all 49 pts that had successful primary stenting. Mean proximal angiographic reference lumen diameter was  $2.7 \pm 0.19$  mm, minimum lesion diameter was  $0.8 \pm 0.4$  mm., and pre-stent mean percent stenosis was  $68 \pm 19\%$ . Final stent diameter was  $3.3 \text{ mm} \pm 0.45$  with a final mean percent stenosis of  $20 \pm 14\%$ . Mean final balloon size (IVUS guided) was 3.75 mm. The 49 pts with successful IVUS guided stent expansion did not receive any additional heparin or coumadin after the completion of the procedure and were maintained on ticlopidine 250 mg bid for 2 months. At a mean follow-up of 83 days (range 42 to 145 days), there have been no acute or subacute thrombosis and no vascular or bleeding complications. Angiographic follow-up is scheduled in all patients at five months. Conclusions: IVUS guidance allows for safe stenting of vessels traditionally not considered ideal for stenting. When optimal stent expansion is achieved subsequent anticoagulation may not be necessary.

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