



# HeartCare Partners

## Expert Advice on Drug Eluting Stents – The Other Side of Story.

*Dr. Stephen Cox, Dr. Tony Rafter, Dr. Anders Taylor, Dr. Robert Fathi.*  
Interventional Cardiologists – HeartCare Partners.

Recent concerns have been voiced about the safety and efficacy of Drug Eluting Stents (DES) in the treatment of coronary artery disease. We believe that some of the information which has been circulated is inappropriately alarmist and does not reflect a balanced assessment of the available data. We therefore feel that it is important to present the rationale for contemporary interventional cardiology practice.

### Key points:

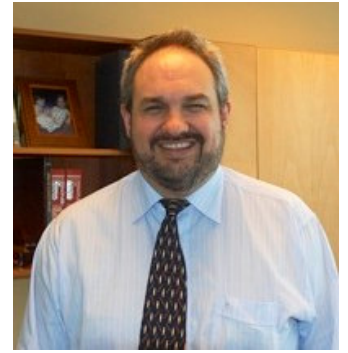
- *DES significantly reduce restenosis in coronary angioplasty.*
- *DES have a very slight increased risk of late stent thrombosis compared to bare metal stents.*
- *DES do NOT increase mortality compared to bare metal stents.*
- *Uninterrupted antiplatelet therapy reduces cardiac risk in all cardiac patients.*

### A Few Facts –

1. Stents have been shown, in repeated studies, to **reduce** recurrent myocardial infarction and death in patients who present with acute myocardial infarction and other acute coronary syndromes (unstable angina).
2. Stents have been repeatedly shown to **reduce** the need for repeat procedures when compared to balloon angioplasty alone (where no stent is used).
3. In patients with stable angina, the main role for coronary stenting is the relief of symptoms. Many studies have shown that angioplasty and stenting are more effective than medical therapy in relieving symptoms and improving quality of life. Critics of stenting make much of the fact that there is no study demonstrating a reduction in mortality in patients with stable angina. Stable angina has a low annual mortality, and any trial of stenting versus medical therapy would need to enrol tens of thousands of patients and follow them for years. It would be difficult to enrol patients with ongoing symptoms in such a trial. It is important to stress that there is **no** evidence that the stenting increases the risk of death in any patient subset.
4. Drug Eluting Stents (of which there are several brands and types) release cytostatic or cytotoxic drugs locally to reduce the incidence of restenosis. They are dramatically effective in this regard. In the era of “bare metal” stenting we anticipated that about 20-30% of lesions would recur to a degree that further intervention might be required – this has **fallen** to about 5% since the introduction of DES.
5. Restenosis is **not** a benign phenomenon. Apart from the need for repeat hospitalisation and further procedures, lost income and jeopardised employment, in about 10% of patients restenosis presents as acute myocardial infarction or sudden death. Some patients with restenosis require open heart surgery to repair the problem, which would not have been necessary if a drug eluting stent had been employed.

### Now to stent thrombosis.

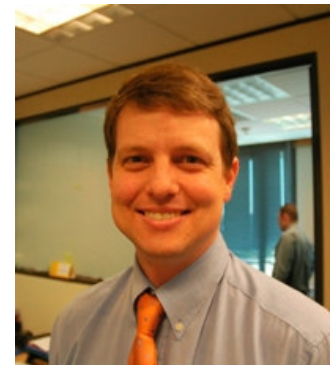
- Any foreign object placed in a blood vessel can cause thrombosis. The consequence of this is myocardial infarction and sometimes sudden death. In this respect bare metal stents and DES are **no** different. Steps are taken to reduce this risk by insisting that patients – stop smoking and take anti-platelet medications – usually aspirin and clopidogrel, for a variable amount of time after stent implantation.



Dr Stephen Cox

Dr Cox trained in angioplasty in Australia and Boston, USA. His interests include cardiac and peripheral angioplasty and stenting. His special area of expertise is the percutaneous closure of atrial septal defects and patent foramen ovale. Stephen visits Kingaroy and Rockhampton. He is based at Wesley.

**HCP Wesley -  
3858 8600**



Dr Anders Taylor

Dr Taylor trained in angioplasty in Canada before returning to HCP. His diverse interventional skills are often called upon at Greenslopes Private where he sees veterans and private patients. He also consults fortnightly in Beaudesert.

**HCP Greenslopes -  
3394 3100**



Dr Robert Fathi

Dr Fathi trained in coronary and peripheral angioplasty at the Cleveland Clinic. His special area of interest is carotid stenting - a clinical trial proven alternative to surgery. He has privileges at The Wesley, where he consults, and Greenslopes Private. Rob visits Hervey Bay monthly and consults in Ipswich.



Dr Tony Rafter

Dr Rafter angioplasty training was completed in Perth at one of Australia's busiest and most respected centres. His interests include coronary stenting and intravascular ultrasound. Tony consults at Wesley, Clayfield and Gladstone.

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**38588600**

- There is evidence that **stopping** all antiplatelet therapy, at anytime, after any type of stent may lead to stent thrombosis. This risk is probably higher with DES.
- The difference with DES is that they require clopidogrel for a minimum of **6 months** whereas bare metal stents may only require it for 1 month. It has been our experience, and that of many others, that stopping clopidogrel 6 or 12 months after the stent procedure is **not** associated with a detectable increase in stent thrombosis.
- There **IS** evidence that long term aspirin and clopidogrel may not be safe for some patients and that dual anti-platelet therapy carries an **increased** risk of bleeding (see commentary - <http://www.americanheart.org/presenter.jhtml?identifier=3038359> ). This risks need to be considered for each patient.
- The published data suggests that the overall risk of stent thrombosis, with DES, is **very low** – under 1%. This risk may, however, persist for some years after DES implantation. That should be compared to the 10-30% risk of restenosis with bare metal stents AND the 10% risk that restenosis will cause death or infarction. (see this recent overview of the topic - <http://crf.breezecentral.com/p67755028/> )

While we can argue about trial data and statistics, our real world experience with over **3 years and 2000 implanted DES, by HeartCare Partners alone**, shows them to be safe and effective for MOST patients.

We believe that a well rounded view of the data suggests the following –

- a. Stenting is an effective treatment with PROVEN benefit for many patients with coronary artery disease.
- b. DES reduce the need for repeat procedures including repeat stenting or bypass surgery.
- c. Dual antiplatelet therapy for life is NOT supported by the current evidence and carries a risk of its own - principally increased bleeding.
- d. DES are associated with a very small, long term, risk of stent thrombosis which, evidence suggests, is offset by their other benefits.
- e. All patients with proven coronary disease or stents (any type) should remain on **life-long** antiplatelet therapy (usually aspirin alone). Stopping aspirin for any surgical procedure or intervention **IS** associated with an increased risk of infarction or death. The balance of risks must be weighed up and discussed with the patient.
- f. Some patients might be better treated with bare metal stents (**not DES**) eg –
  - the very elderly,
  - those who will need a surgical procedure within 1-2 years,
  - those with prior bleeding problems who are at risk from dual anti-platelet therapy,
- h. Patients and coronary lesions with the following characteristics have evidence of **benefit** from DES over bare metal stents– diabetics, vessels less than 3mm in diameter (the majority of currently treated lesions), bypass grafts which require stenting, long lesions (probably greater than 18mm) in any sized vessel, bifurcation lesions and any lesion where restenosis would place the patient at high risk – ostial lesions, poor cardiac function, multivessel disease.

For us, at **HeartCare Partners**, it comes down to individualising the treatment and stent for each and every patient we see. The treatment is tailored to the patient in the hope that they get the best short and long term outcome. Patients and doctors need to remember that no treatment is completely safe. All carry risk but 'no treatment' or medication alone may not be adequate. Please contact us at **HeartCare Partners** for further information.

In the end, if you ask us what stent we would have if we were the patient, the answer would be a Drug Eluting Stent, in most situations.

**Dr. Stephen Cox,**

**Chairman, Clinical Management Committee, HeartCare Partners.**

[www.heartcarepartners.com.au](http://www.heartcarepartners.com.au)