

# **Bioabsorbable Scaffold Stents for the Endovascular Treatment of Infrapopliteal Lesions in Critical Limb Ischemia**

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# Disclosures

## Jihad Mustapha, MD

- Abbott Vascular - Consultant, Speaker, Medical Advisory Board
- Bard Peripheral Vascular - Research, Consultant, Medical Advisory Board, Speaker, Trainer
- Bayer - Medical Advisory Board
- Biotronik - Research
- Boston Scientific - Speaker, Consultant
- Cardiovascular Systems, Inc. - Research, Consultant, Speaker, Trainer
- Cook Medical - Research, Consulting, Speaker, Trainer
- Cordis - Consultant, Trainer
- Medtronic - Consulting, Speaker, Trainer
- Terumo - Consulting, Speaker, Trainer
- Triage - Research
- Spectranetics – Research, Consulting
  
- All the other authors have nothing to disclose

# Historical Data

**Drug eluting stents for coronaries**

**Drug eluting stents for peripheral artery disease**

**BVS for coronaries**

**BVS for peripheral artery disease ??**

# Introduction

**Coronary drug eluting stents(DES): treatment of peripheral vascular disease (PVD) of patients with chronic limb ischemia (CLI)**

**Novel stents using bioresorbable vascular scaffolds (BVS) :**

- Overcome the constrictive remodeling of endothelium**
- Prevent natural endothelial elastic recoil**
- Reduce lesion re-stenosis**
- Reduce intimal hyperplasia**

**BVS applicability for peripheral vascular disease: Yet to be determined**



# Objectives

**Evaluation of BVS for treatment of chronic limb ischemia**

**To evaluate:**

**1.Efficacy**

**2.Safety**

# Search Method

**Systematic search of the PubMed, EMBASE, and Cochrane databases up to November 2015**

**Data from all the clinical studies**

**Clinical outcomes of BVS use for chronic limb ischemia of infra-popliteal disease**

# Primary Outcomes

**30 days mortality**

**Amputation**

**Bypass surgery**

**Clinically driven target lesion revascularization (TLR)**



# Secondary Outcomes

**Definite or probable stent thrombosis (ST)**

**Pseudo-aneurysm**

<b>Outcomes n (%)</b>	<b>Peeters.2005 20</b>	<b>Varcoe.2015 14</b>	<b>Total 34</b>
<b>Death</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Amputation</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Bypass Surgery</b>	<b>0</b>	<b>1 (14)</b>	<b>1 (2)</b>
<b>TLR</b>	<b>1 (5)</b>	<b>1 (14)</b>	<b>2 (5)</b>
<b>Scaffold Thrombosis</b>	<b>1 (5)</b>	<b>2 (14)</b>	<b>3 (8)</b>
<b>False Aneurysm</b>	<b>1 (5)</b>	<b>0</b>	<b>1 (2)</b>

# Conclusion

**BVS is safe and feasible option for CLI of infra-popliteal**

**Should be considered the optimal treatment for IP lesions**

# Discussion

**Stent thrombosis: is it similar to coronaries stent ?**

**Comparison to drug coating balloon and balloon angioplasty**

**Different recoil morphology compared to coronary arteries**

**Early clinical and imaging data sustain further randomized trials**

# Limitations

**Small sample size**

**Short-term follow up**

**Lack of randomized data**


**No angiographic follow up analysis**

## Future ?



# Thank you!





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