# Title: Movahed Coronary Bifurcation Classification Should be Utilized for Research Involving Left Main Bifurcation Lesions

Mohammad Reza Movahed<sup>1</sup>

<sup>1</sup>Affiliation not available

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## 1. Introduction

Many authors (1) using unjustified Medina Coronary bifurcation lesion classification that unfortunately divides true bifurcation lesions into three unnecessary groups: 111, 101, and 011 as opposed to The Movahed classification summarizing true bifurcation lesions into one simple category called B2 lesions.

#### 2. Arguments

Using the wrong classification has led to missing data about the bifurcation vessel angulation or other important characteristics such as calcifications or lesion length that are available in the Movahed classification by adding optional suffixes to the B2 suffix. (2). The basic structure of the Movahed classification 2,3 simplifies bifurcation lesions into three categories: If both branches are involved, it is called a B2 lesion, if only the main branch is involved, is called B1m (B for bifurcation, 1m meaning only the main branch has disease) and if only side branch is involved, is called B1s lesion (B for bifurcation and 1s meaning only side branch has the disease). Additional suffixes can be added if needed for clinical or research purposes. This comes in very handy, particularly in the left main bifurcation lesions. As the best example, the kissing stenting technique in appropriate bifurcation left main lesions can be performed very safely and quickly but it requires that the proximal segment be large enough to accommodate 2 stents and has to be at least 2/3 sum of distal bifurcation branches. In the Movahed classification, this suffix is called L (L for the large proximal segment) or S (for the small proximal segment). Furthermore, limitless additional suffixes can be added if needed such as calcium or bifurcation angle that is completely absent in the Medina classification. (3-8) Figure 1 compares the basic structure of the Movahed classification to the Medina Classification. Figure 2 summarizes a detailed description of the Movahed classification if additional suffixes are needed.

### 3. Conclusions

The Movahed bifurcation classification is very simple in it basic description of any given coronary bifurcation lesion. Furthermore, the ability to add unlimited suffices to the basic description of a bifurcation lesion, it makes it very useful for clinical and research as opposed to the Medina classification that lacks any optional suffixes and separate true bifurcation lesions in three unnecessary groups.

#### **References:**

- Watanabe Y, Mitomo S, Naganuma T, Chieffo A, Montorfano M, Nakamura S, Colombo A. Prognostic Impact of Target Lesion Revascularization on Long-Term Cardiac Mortality After Current-Generation Drug-Eluting Stent Implantation for Left Main Distal Bifurcation: the Milan and New-Tokyo (MITO) Registry. Cardiovasc Revasc Med. 2023 Apr;49:1-6. doi: 10.1016/j.carrev.2022.11.007. Epub 2022 Nov 15. PMID: 36481102
- 2. Movahed MR, Stinis CT. A new proposed simplified classification of coronary artery bifurcation lesions and bifurcation interventional techniques. J Invasive Cardiol. 2006 May;18(5):199-204.

- Movahed MR. Coronary artery bifurcation lesion classifications, interventional techniques and clinical outcome. Expert Rev Cardiovasc Ther. 2008 Feb;6(2):261-74
- 4. Movahed MR. Quantitative angiographic methods for bifurcation lesions: a consensus statement from the European Bifurcation Group. Shortcoming of the Medina classification as a preferred classification for coronary artery bifurcation lesions in comparison to the Movahed classification. Catheter Cardiovasc Interv. 2009 Nov 1;74(5):817-8.
- 5. Movahed MR. Studies involving coronary bifurcation interventions should utilize the most comprehensive and technically relevant Movahed coronary bifurcation classification for better communication and accuracy. Am J Cardiol. 2010 Apr 15;105(8):1204-5
- 6. Movahed MR. B2 lesions are true bifurcation lesions simply categorized as one group according to the Movahed bifurcation classification. J Invasive Cardiol. 2010 May;22(5):252
- Movahed MR. Major limitations of randomized clinical trials involving coronary artery bifurcation interventions: time for redesigning clinical trials by involving only true bifurcation lesions and using appropriate bifurcation classification. J Interv Cardiol. 2011 Aug;24(4):295-301
- 8. Movahed MR. Is it time to consider the Movahed classification as the preferred classification for coronary bifurcation lesions? EuroIntervention. 2010 Jan;5(6):652;

Figure1: Comparison of the Movahed to the Medina coronary bifurcation classification revealing the simplicity of the basic suffix of the Movahed classification.



Figure 2: Details of the Movahed Bifurcation Classification with limitless optional suffixes:

