Abstract— Coronary artery disease (CAD), the most common form of heart disease, is also the leading cause of death in the United States. Recently, studies have shown that drug eluted stents have demonstrated to be generally more effective and prosperous than bare metal stents. Here we describe several studies that discuss the benefits of these stents in patients with coronary artery disease.

I. INTRODUCTION

Coronary artery disease (CAD) is the leading cause of death in the US for both men and women. The arteries ultimately become narrow, requiring an invasive tactic to manipulate the shape of the blood vessel walls. Without the awareness of the disease and proper medical attention, CAD can lead to heart failure [5]. Clinicians have been working to perfect the stainless steel device that allows for the temporary fix of this build up in the arteries. The stent consists of mesh-like walls and stainless steel tubes, which are utilized by the catheter for balloon angioplasty. Through procedures like laser machining and microelectrodischarge machining, the stainless steel metal can be perfectly crafted into a stress relieving device that accommodates to the large deformations of coronary arteries [4].

The inflation syringe allows for the easy inflation and deflation of the balloon that molds the stent. This stent contains the critical characteristics of bending compliance and radial stiffness.

II. BARE METAL STENTS VS. DRUG-ELUTED STENTS

Many recent studies have investigated and questioned the optimal effectiveness of bare metal stents (BMS) in cardiac disease patients. To assess the overall favored stent apparatus, researchers constructed a study on eligible patients receiving either bare metal stents or drug eluting stents [3]. Patients with either stable angina, silent ischemia, or acute coronary syndrome were evaluated. Through randomization, researchers were able to ensure the accuracy of their results.

III. RESULTS

Though it was noted that there were several situations where the drug eluted stents and bare metal stents did not differ, in the focused areas where they did, the drug eluted stents were more favorable. For example, the rate of revascularization was 16.5% in the drug eluted stents, compared to the 19.8% in bare metal stents [2].

IV. DISCUSSION

Recent studies showed there are major benefits to having the ability to choose between a bare metal stent and a drug eluted stent. Currently, the designs do not drastically differ in their public favorableness, giving patients with the inability to obtain drug eluted stents a chance at ultimate recovery. However, the general benefits of using a stent with the power to dissepate any remaining clots does hold drug eluted stents slightly above bare metal stents [1].

REFERENCES