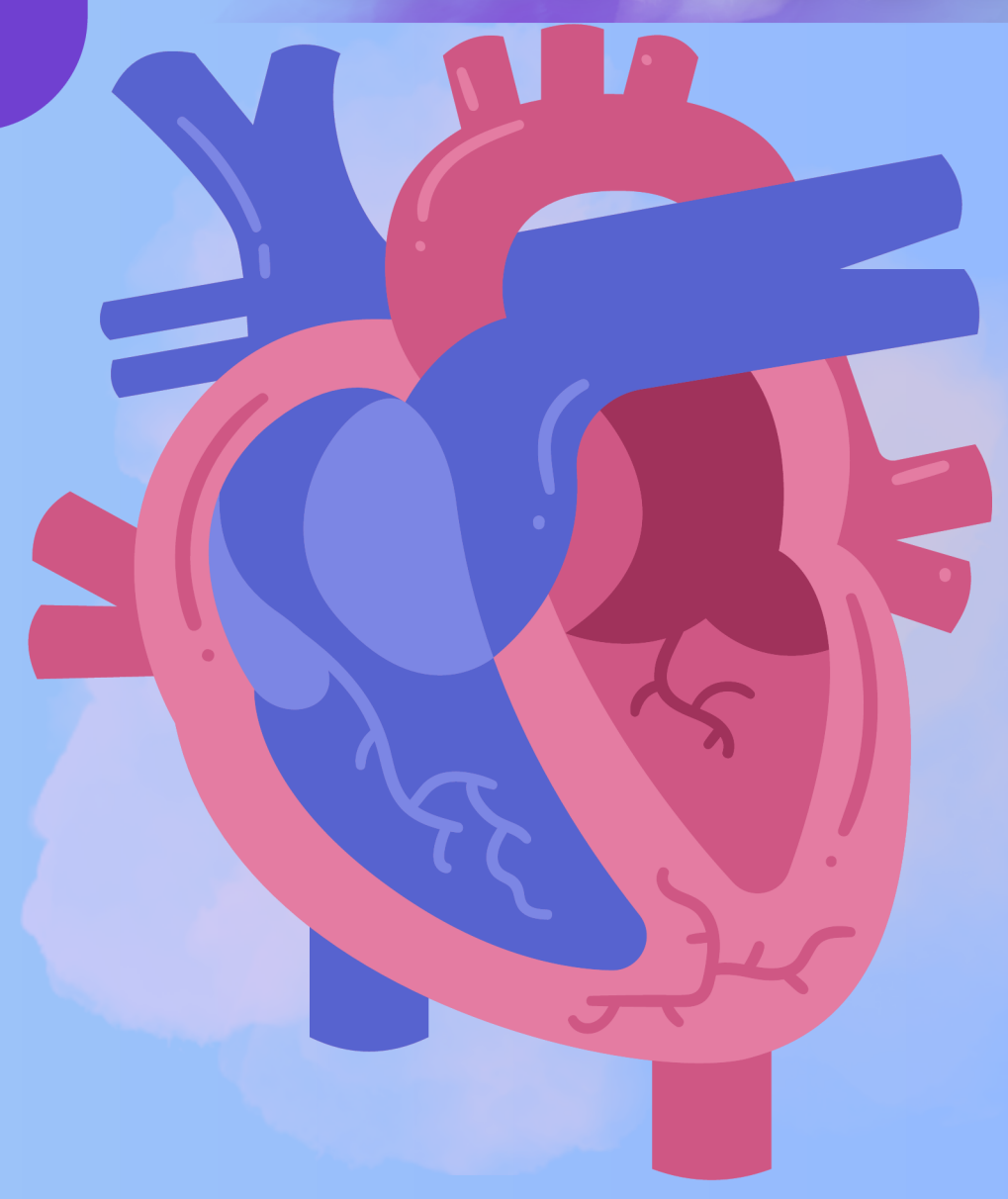


Status of Coronary Artery Disease Treatment with Rotational Atherectomy in Türkiye: Insights and Perspectives of Physicians

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OBJECTIVES

Coronary artery disease (CAD), a leading cause of death worldwide, disproportionately affects individuals aged 65 and older. Rotational atherectomy (RA) treats CAD by using a high-speed drill to remove calcified plaques and expand arteries, often in conjunction with stent placement. This method is particularly effective for high-risk or resistant calcified lesions. The study aims to evaluate the penetration and effectiveness of RA therapy in Türkiye, focusing on CAD. Additionally, it explores the safety and efficacy of this treatment approach.

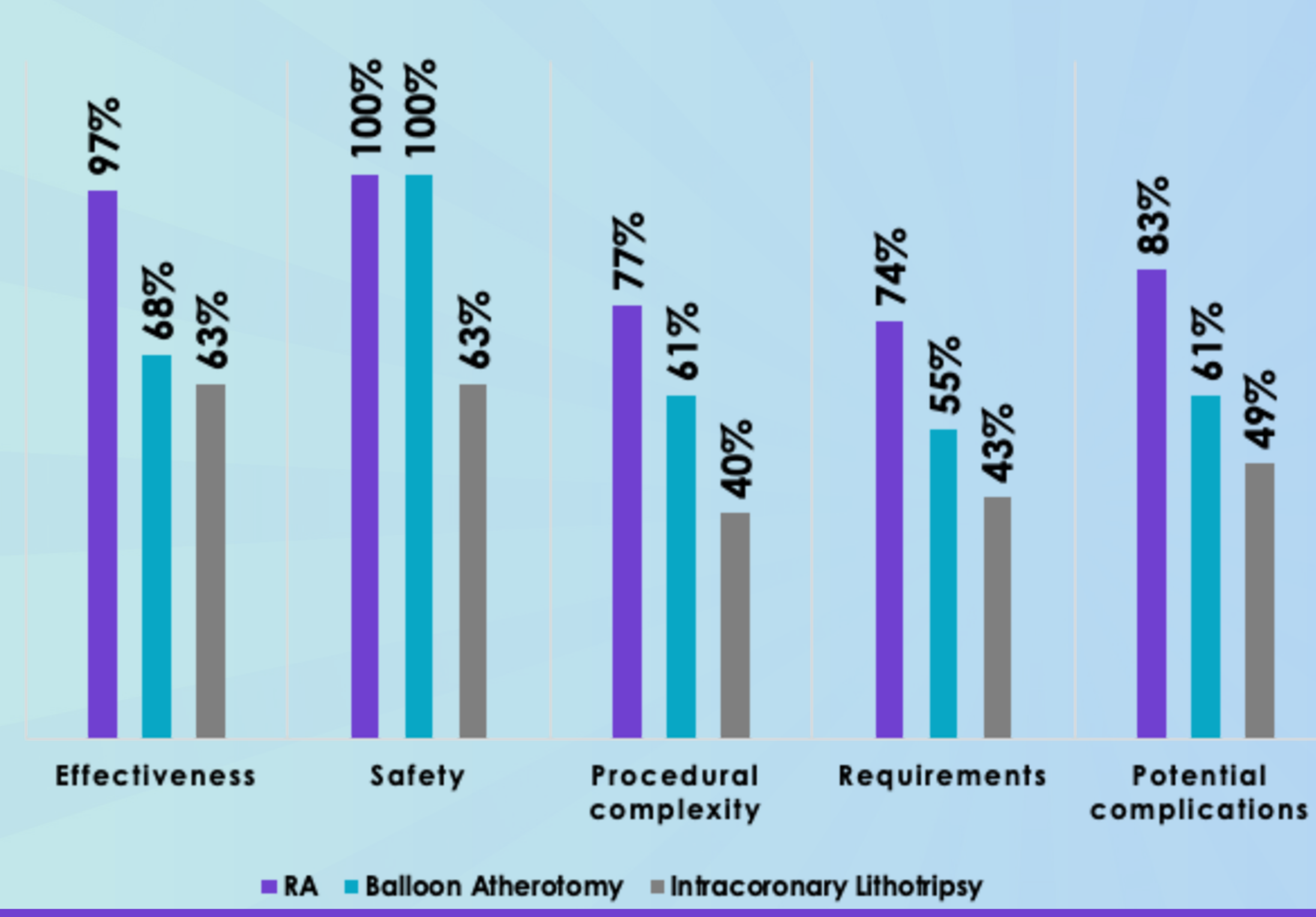
METHOD

A mixed-method approach was utilized for this study. Initially, an e-survey consisting of 16 questions was administered to 62 physicians from May 12, 2023, to January 18, 2024. Subsequently, a semi-structured focus group discussion involving 10 experts was conducted, guided by a moderator, to interpret the key findings of the survey within the framework of Turkish clinical practice. While forming the groups, physicians with common points were grouped in order to ensure a constructive discussion.

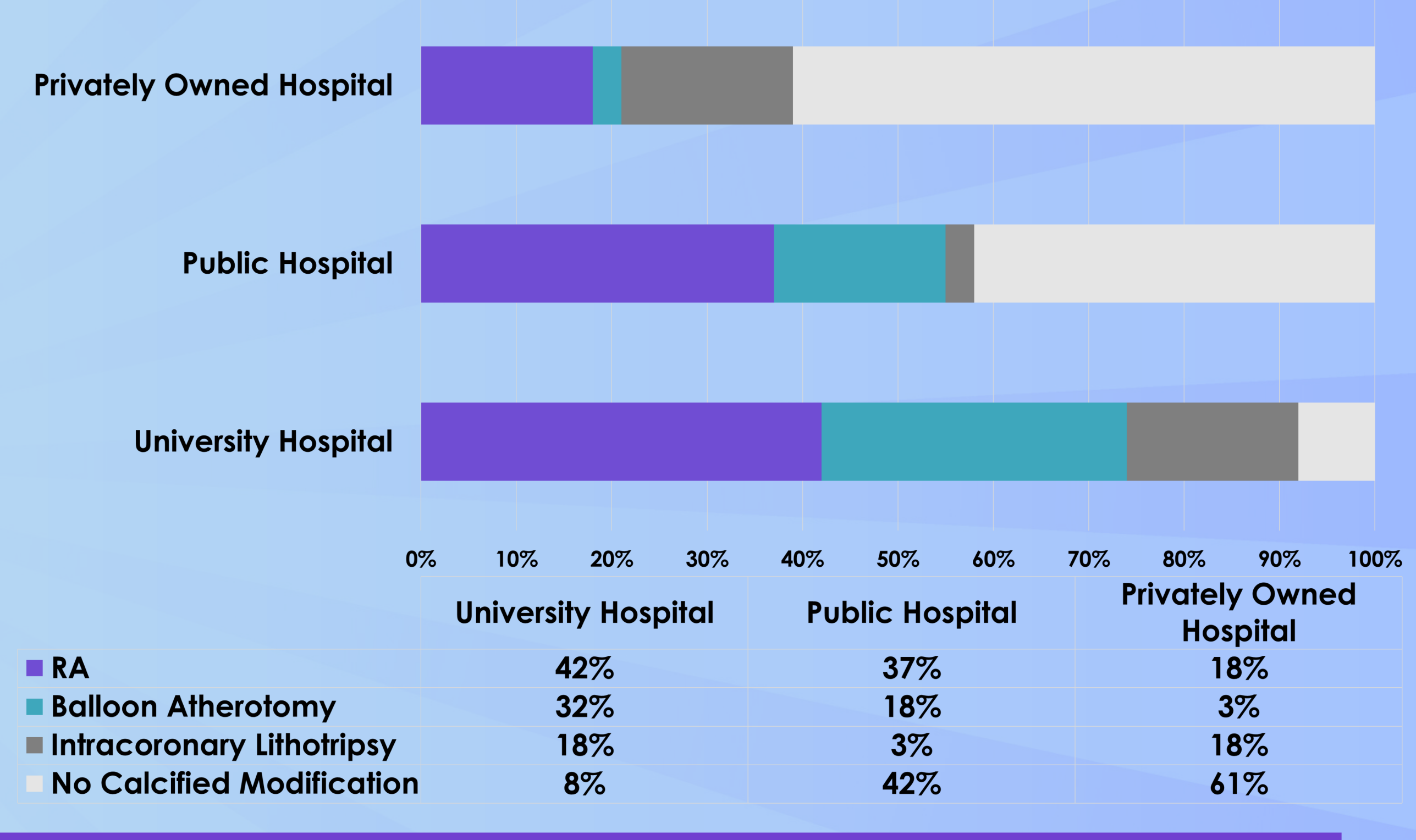
RESULTS

Survey data from Türkiye as of 2024 show a significant increase in percutaneous coronary interventions, with 94% of physicians observing an upward trend, considering observations made over the past 10 years. In the past year, when physicians were asked what they preferred when calcified lesion modification occurred during PCI, 93% of physicians said they preferred and used rotational atherectomy (RA), 62% balloon atherectomy and 31% intracoronary lithotripsy. RA, preferred for its clinical effectiveness—cited by 53% of physicians—and for its reimbursability, cited by 44%, is primarily employed in university hospitals and public hospitals for modifying calcified lesions, where its usage is noted at 42%. The effectiveness of RA is demonstrated by its high success rate in 94% of cases. Additionally, it is associated with a lower rate of cardiovascular death—the most severe complication—recorded at 0.8%, compared to 1.1% for balloon atherectomy and intracoronary lithotripsy. The impact of RA in terms of efficacy, safety, procedural complexity, material requirements, and potential complications received positive to very positive responses of 97%, 100%, 77%, 74%, and 83%, respectively, outperforming Balloon Atherotomy and Intracoronary Lithotripsy.

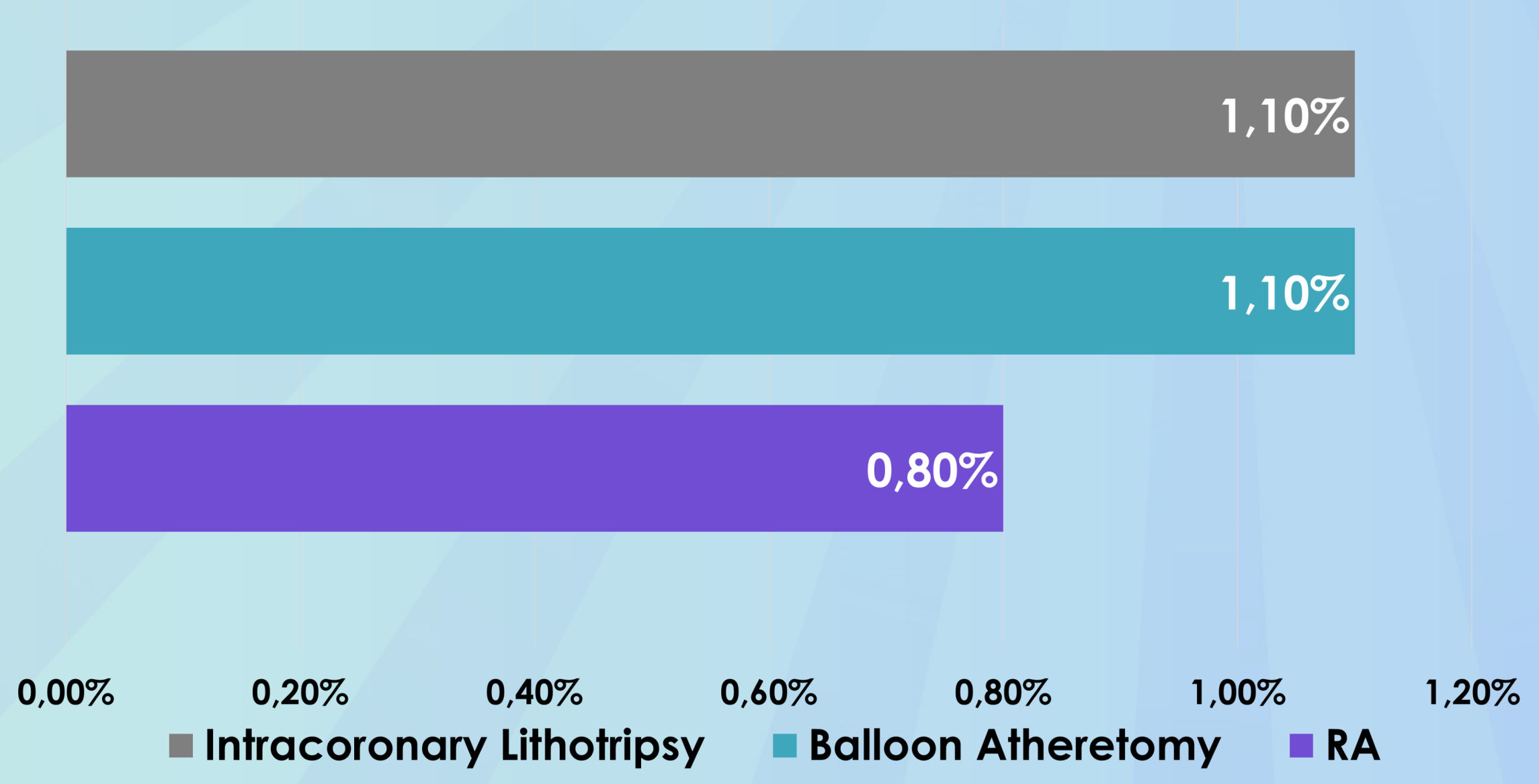
INFLUENTIAL FACTORS IN THE SELECTION OF CALCIFIED LESION MODIFICATION METHODS FOR PCI



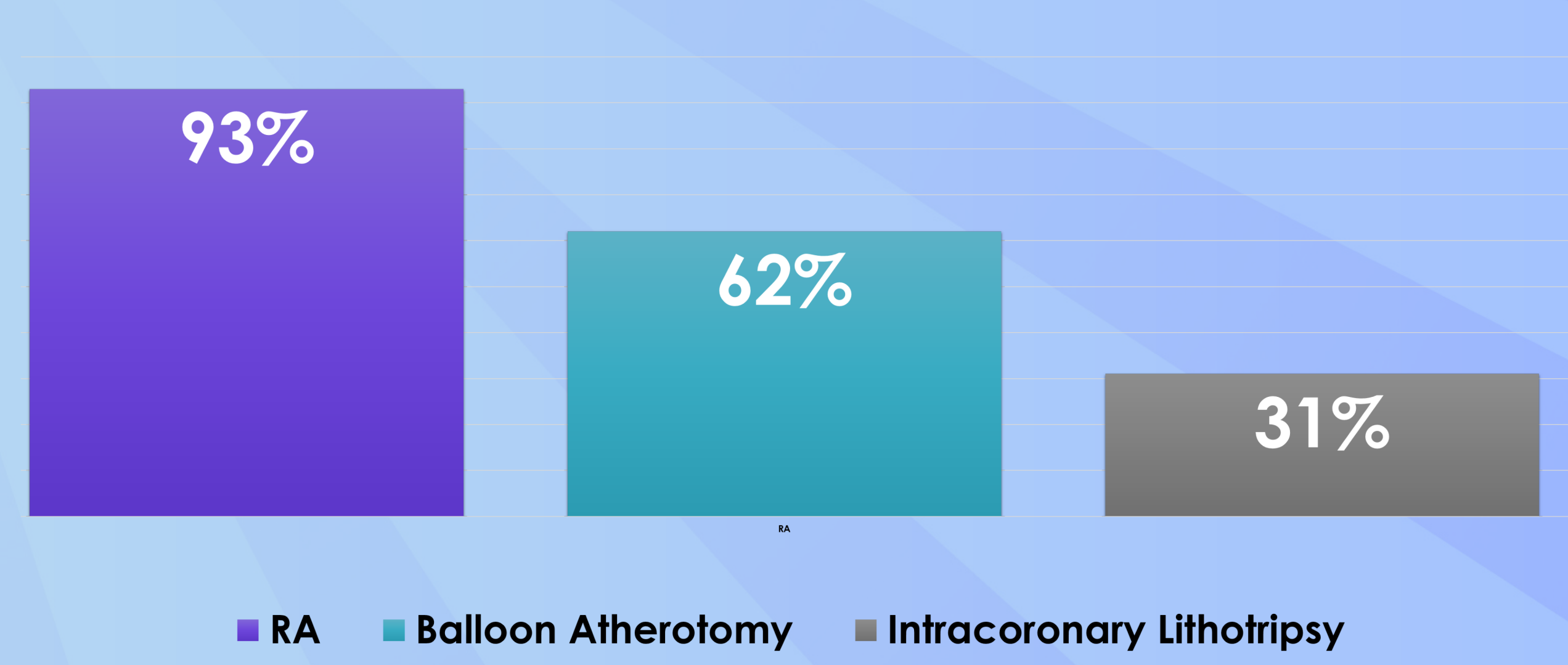
HEALTH INSTITUTIONS AND CALCIFIED LESION MODIFICATION METHODS



CARDIOVASCULAR DEATH RATE



RATIO OF PREFERRED METHODS FOR CALCIFIED LESION MODIFICATION IN PCI PROCEDURES



CONCLUSIONS

RA has emerged as a vital technique for treating complex coronary lesions in Türkiye, significantly enhancing clinical outcomes. RA technology adoption in Türkiye is limited and usually seen as a last resort after other treatments fail. However, RA should be used early, particularly for calcific lesions, as it improves treatment outcomes and speeds up recovery. The favorable results underscore the need for broader adoption and integration of RA into standard treatment protocols. To achieve this, concerted efforts are necessary to increase awareness and interest among key stakeholders, including payers and physicians. Initiatives aimed at educating healthcare providers and aligning reimbursement policies to support RA use are crucial for expanding access and optimizing patient outcomes.