



Universidad de
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PREVALENCE OF PERI-IMPLANTITIS IN POSTGRADUATE IMPLANTOLOGY PATIENTS 5 YEARS AFTER SURGERY: A CROSS-SECTIONAL STUDY

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INTRODUCTION

The widespread use of dental implants for the rehabilitation of partially and fully edentulous patients has become routine, with a documented long-term success rate of 90-95% in 5-10 years. However, a global increase in the use of dental implants has coincided with an increase in complications, particularly cases of peri-implantitis. Reducing the success rate reported to date.

The few studies published to date have identified risk factors for peri-implantitis that include: previous periodontitis, poor plaque control, smoking, uncontrolled diabetes, and genetic factors.

The treatment for peri-implantitis is varied and unpredictable, which emphasizes the importance of early intervention to prevent implant loss and the consequent sequelae. Despite various reports on global prevalence, studies on peri-implant diseases in the Chilean population are lacking, underscoring the need for a local prevalence estimate to guide preventive efforts.

The objective is to estimate the prevalence of peri-implantitis in patients treated with osseointegrated implants at the Universidad de los Andes during the period 2014-2017, with a minimum follow-up of 5 years.

SPECIFIC OBJECTIVES

1. To evaluate the systemic, implantological and prosthetic factors in patients of the oral implantology specialty at the Universidad de los Andes
2. To evaluate biological complications associated with implants installed 5 years ago.
3. Assessing the success and survival of implants installed in the implantology postgraduate program at the Universidad de los Andes during the years 2014-2017.



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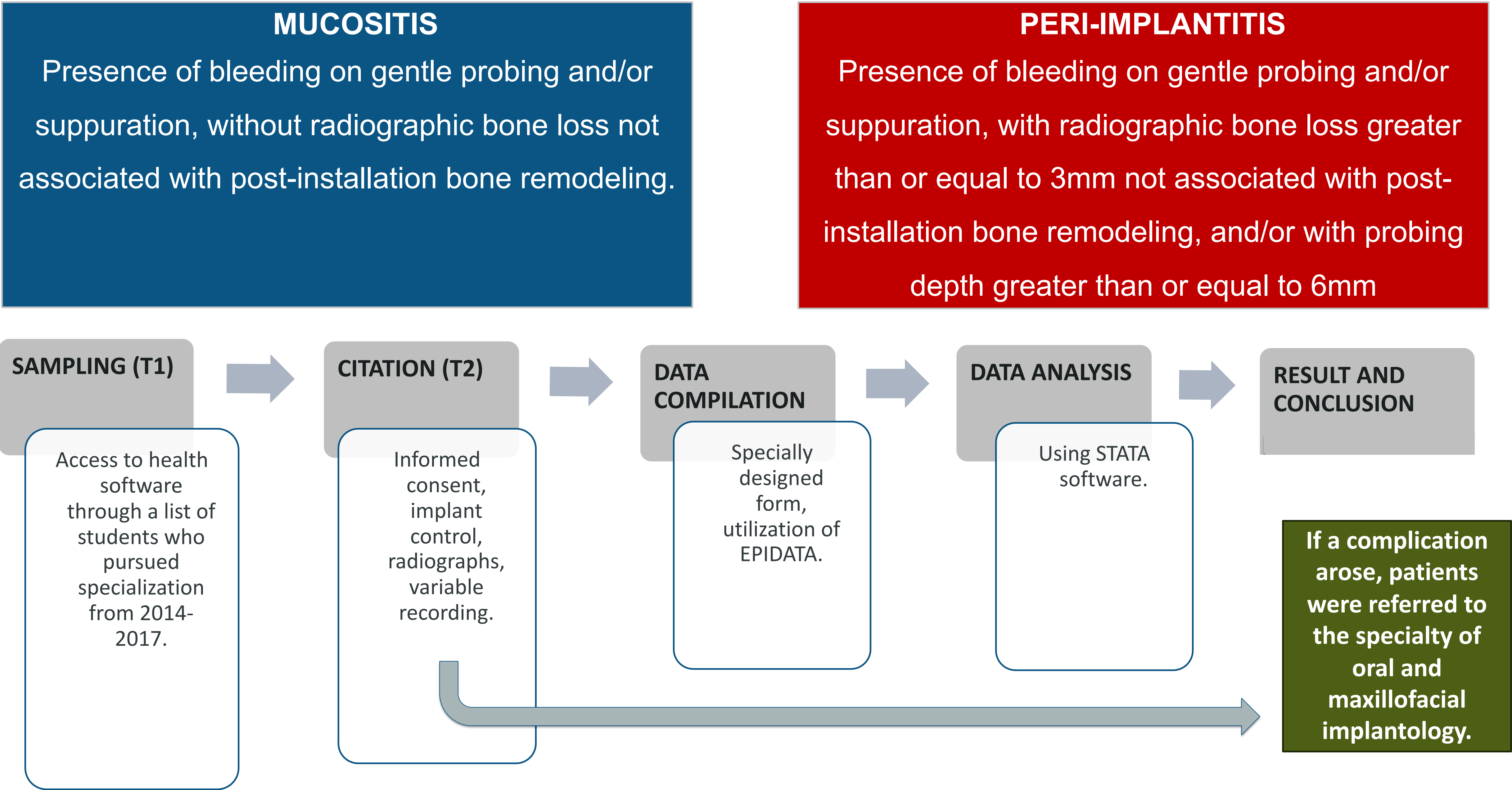
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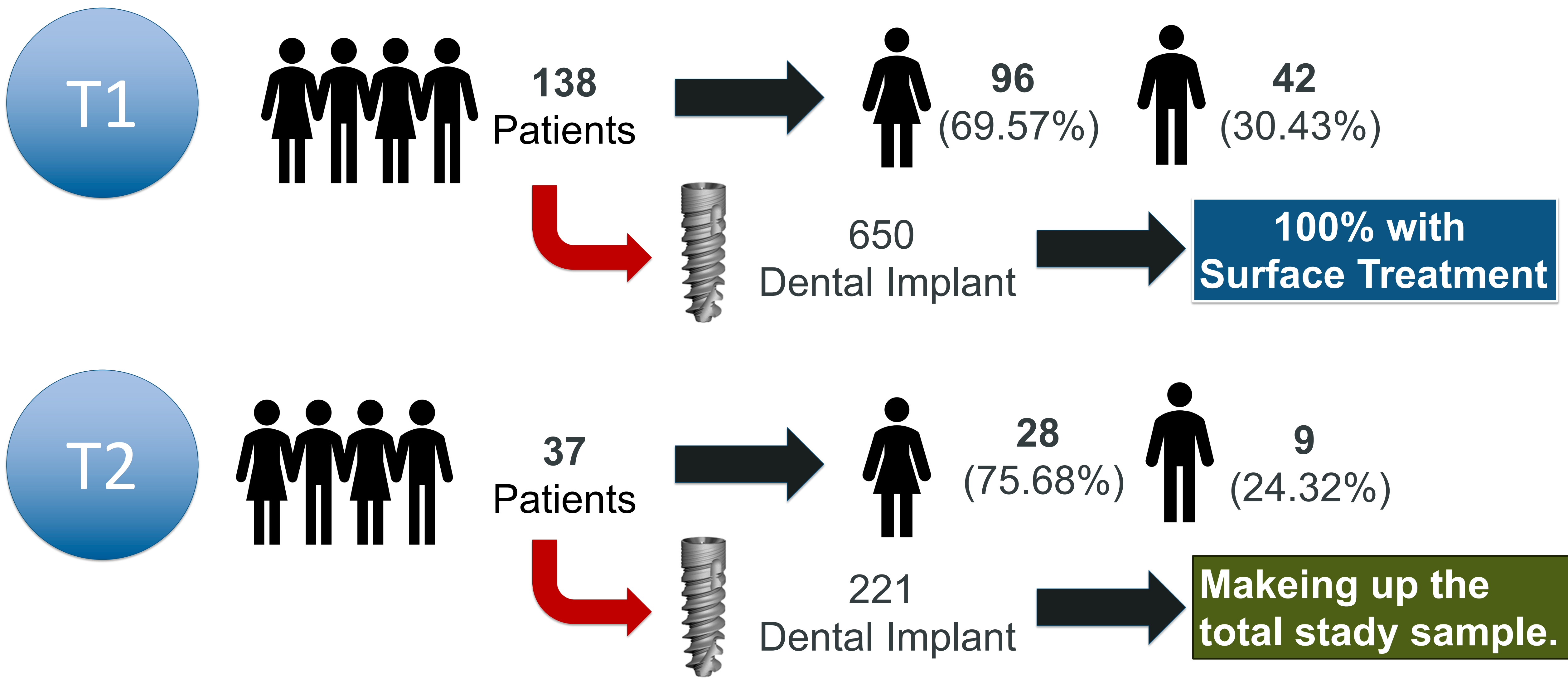
METHOD AND MATERIALS

The **definition of variables** was carried out according to eight characteristics based on scientific evidence and literature review: Demographic, clinical, surgical, rehabilitative, radiographic features, components constituting survival, success, and diagnosis.

The **case definition** was based on the 2018 World Workshop of the American Academy of Periodontology and the European Federation of Periodontology was used as a guide, as detailed below:



RESULTS



IMPLANT PLACED IN T2 PATIENT	
MAXILLA 415 (63,85%)	
Anterior	Posterior
20.31%	44.31%
MANDIBLE 235 (36,15%)	
Anterior	Posterior
6.46%	28.92%



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The average follow-up time for the evaluated implants was 6.4 years from installation and 5.4 years from their rehabilitation.

T1				T2		
SYSTEMIC CONDITION	ASA I 38.41%	ASA II 57.25%	ASA III 4.35%	ASA I 32.43%	ASA II 67.57%	ASA III 0%
SMOKING	No smoking 54.84%	Cigarettes 1 – 10 25.81%	> 10 Cigarettes 8.6%	No smoking 62.16%	Cigarettes 1 – 10 27.03%	> 10 Cigarettes 2.7%
PERIODONTAL STATUS	Healthy 61.24%	Periodontitis 38.76%		Healthy 43.24%	Periodontitis 56.76%	
PERIODONTAL THERAPY	Without PST 74.64%	1-2 PST 16.66%	> 3 PST 8.69%	Without PST 45.95%	1-2 PST 35.14 %	> 3 PST 18.92%
CAUSE OF TOOTH LOSS	Dental Caries 61.63%	Periodontal Disease 29.94%	Others 8.43%			
IMPLANT PLACEMENT	Native bone 75%, 9%	Grafted bone 24.1%		Native bone 79.15%	Grafted bone 20.85 %	
CONNETION	Submerged implant 84.94%	Immediate provisionalization 10.10%	Healing abutment connection 4.97%	Submerged implant 88.04%	Immediate provisionalization 3.35%	Healing abutment connection 8.61%
ADDITIONAL SURGERIES	GBR 57.59%	Sinus Lift 35.07%	Autologous bone block 3.4%	GBR 75.36%	Sinus Lift 15.94%	Ridge Split 2.26%
TYPE OF REHABILITATION	Unitary 38.78%	Plural 33.41%	Total 23.41%	Unitary 32.86%	Plural 41.03%	Total 26.15%
RESTRAINT SYSTEM	Screw-retained 78.96%	Cement-retained 18.20%	Attachment-retained 2.84%	Screw-retained 91.62%	Cement-retained 18.20%	

PST: Periodontal support therapy



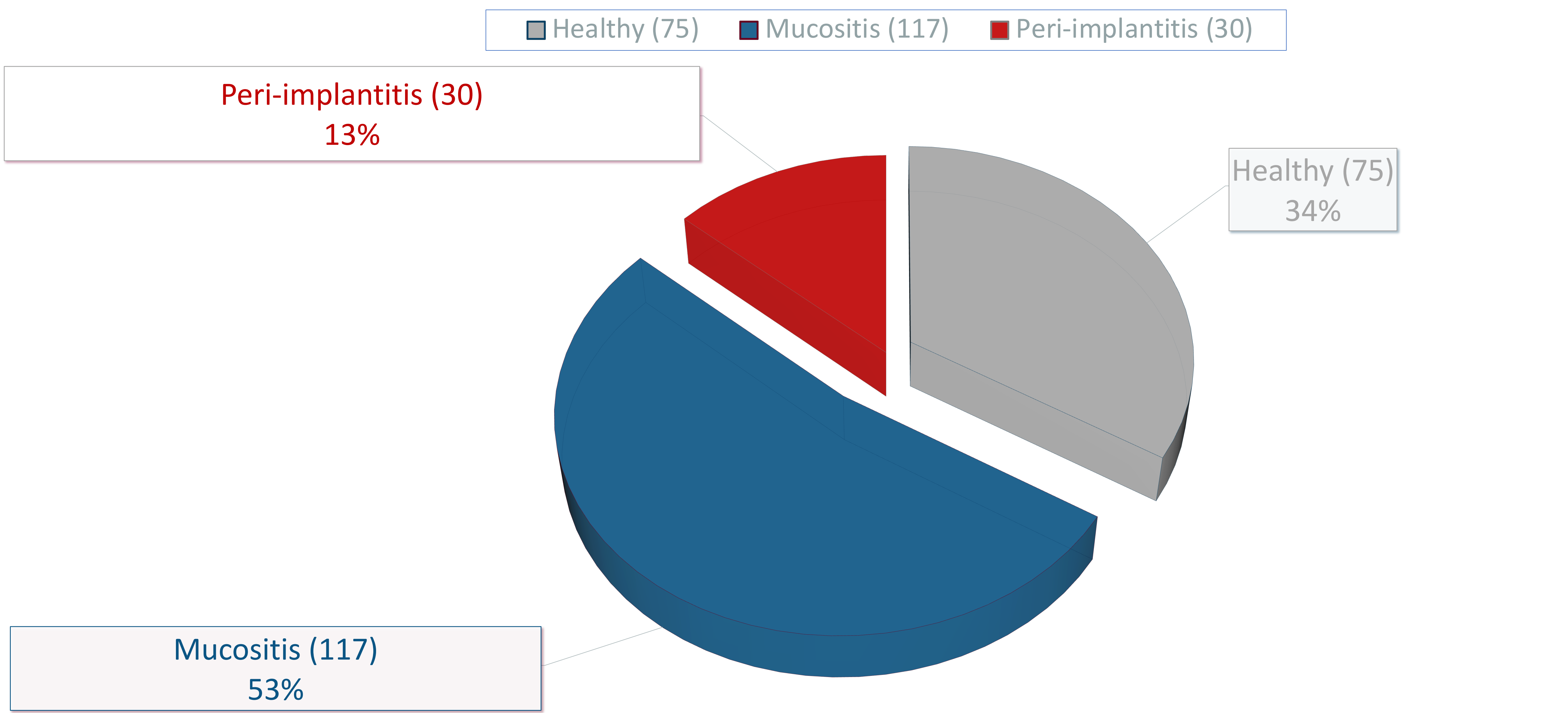
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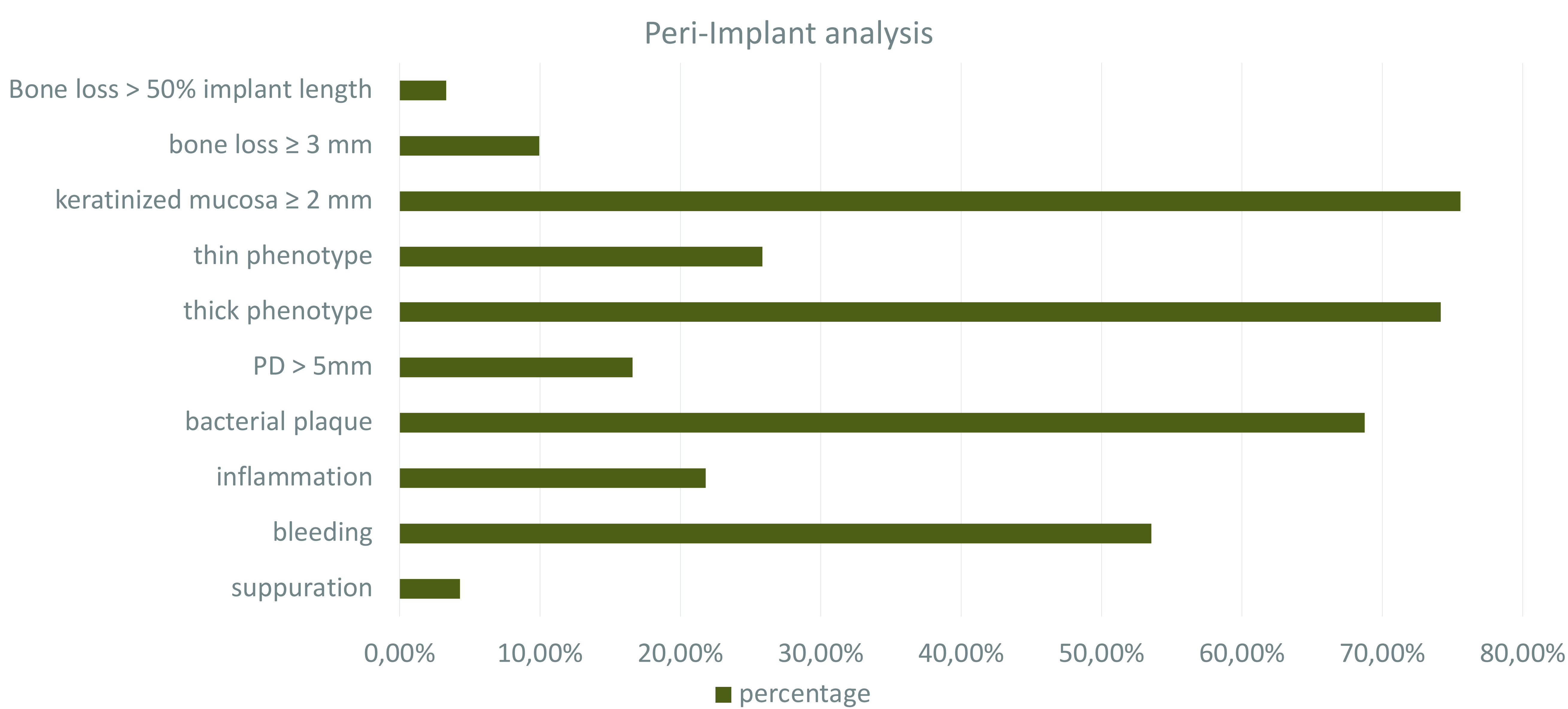
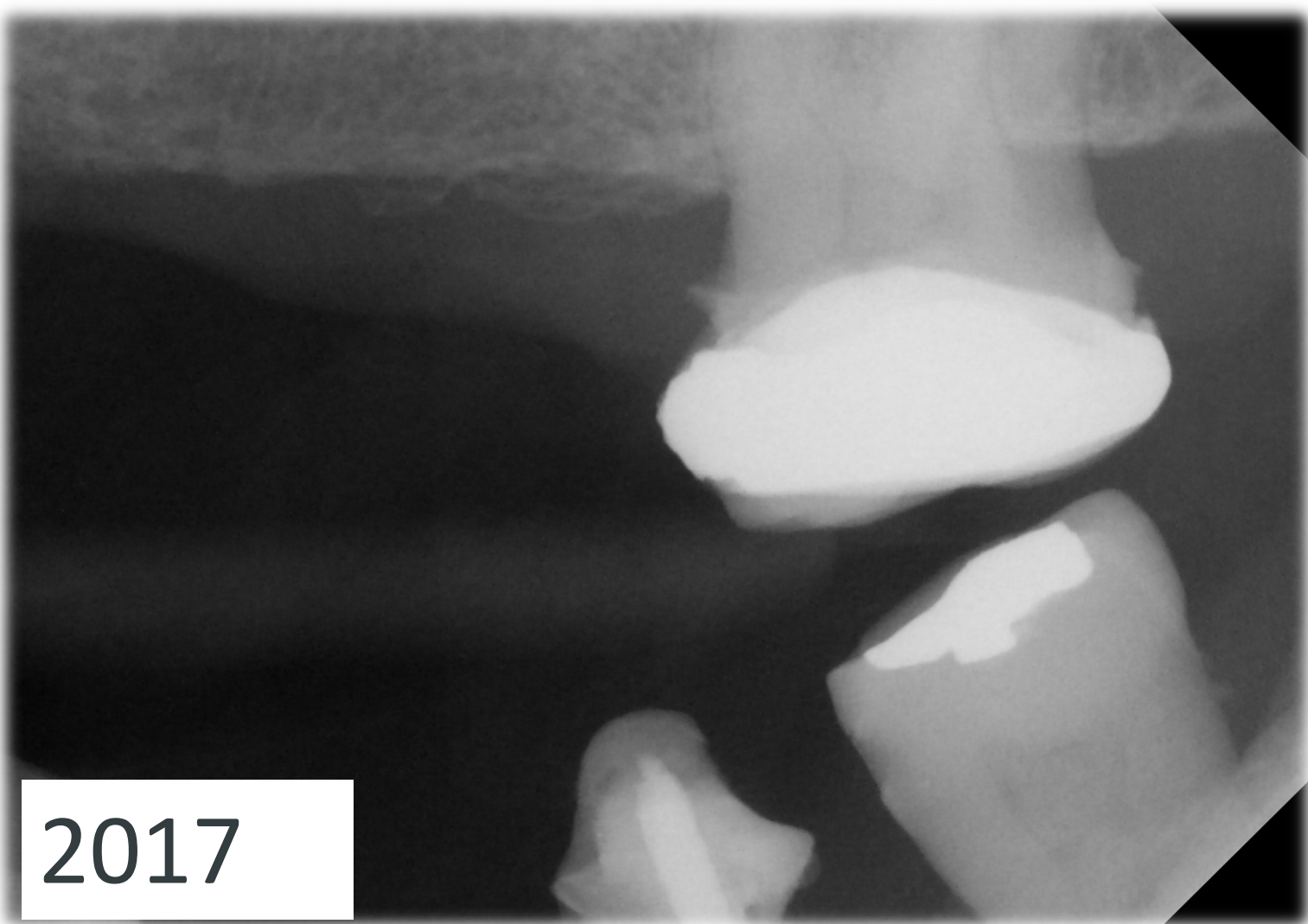
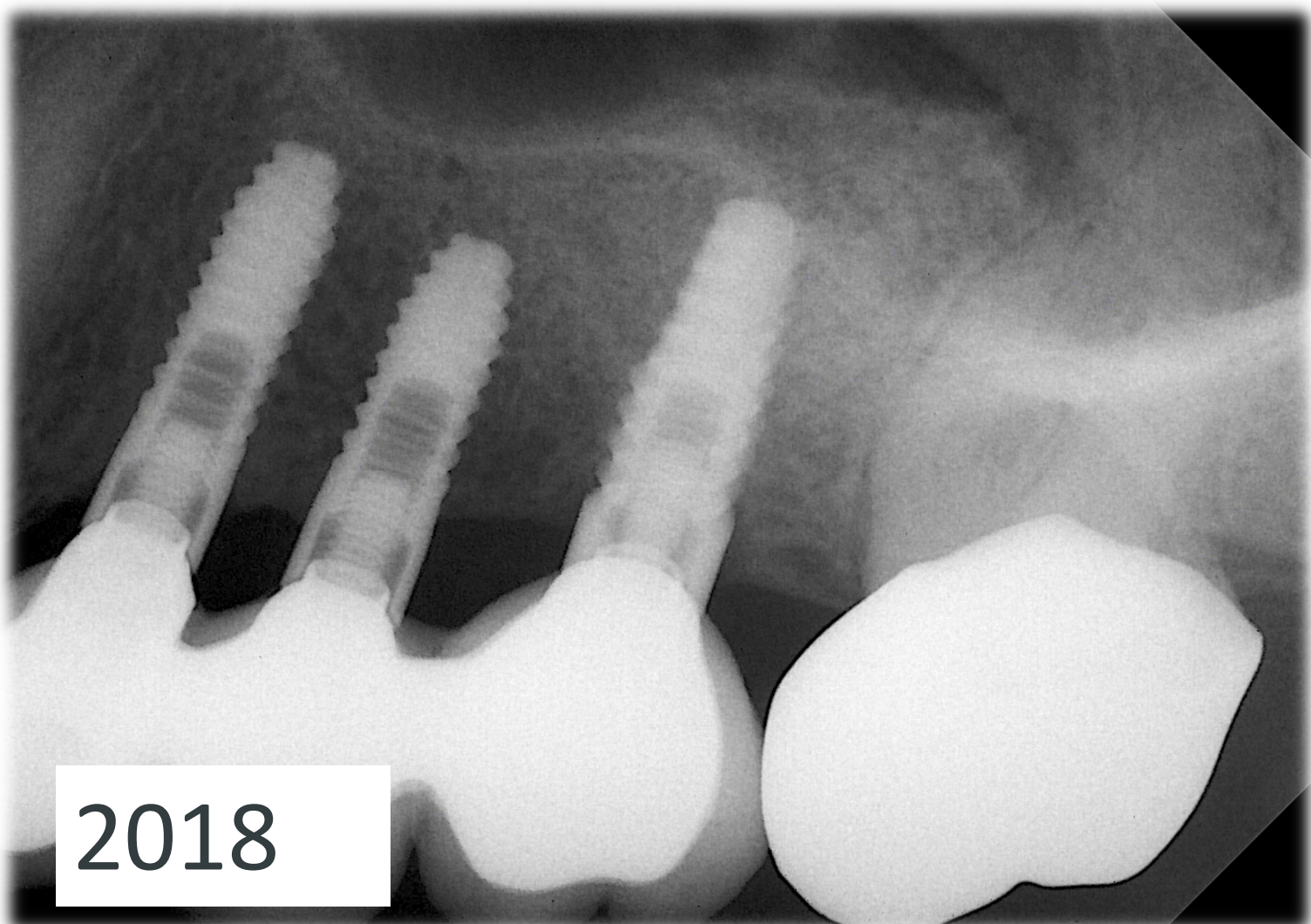
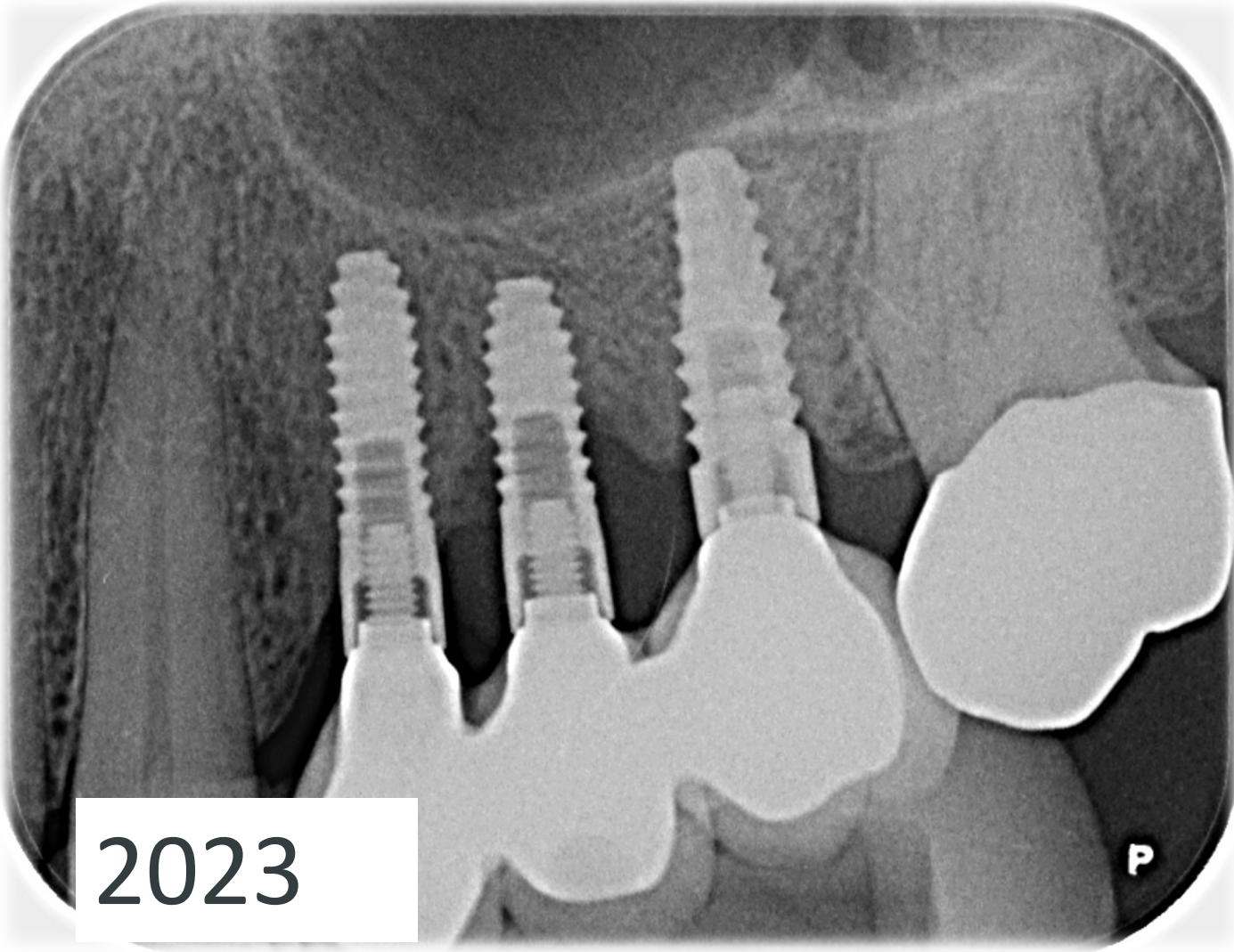
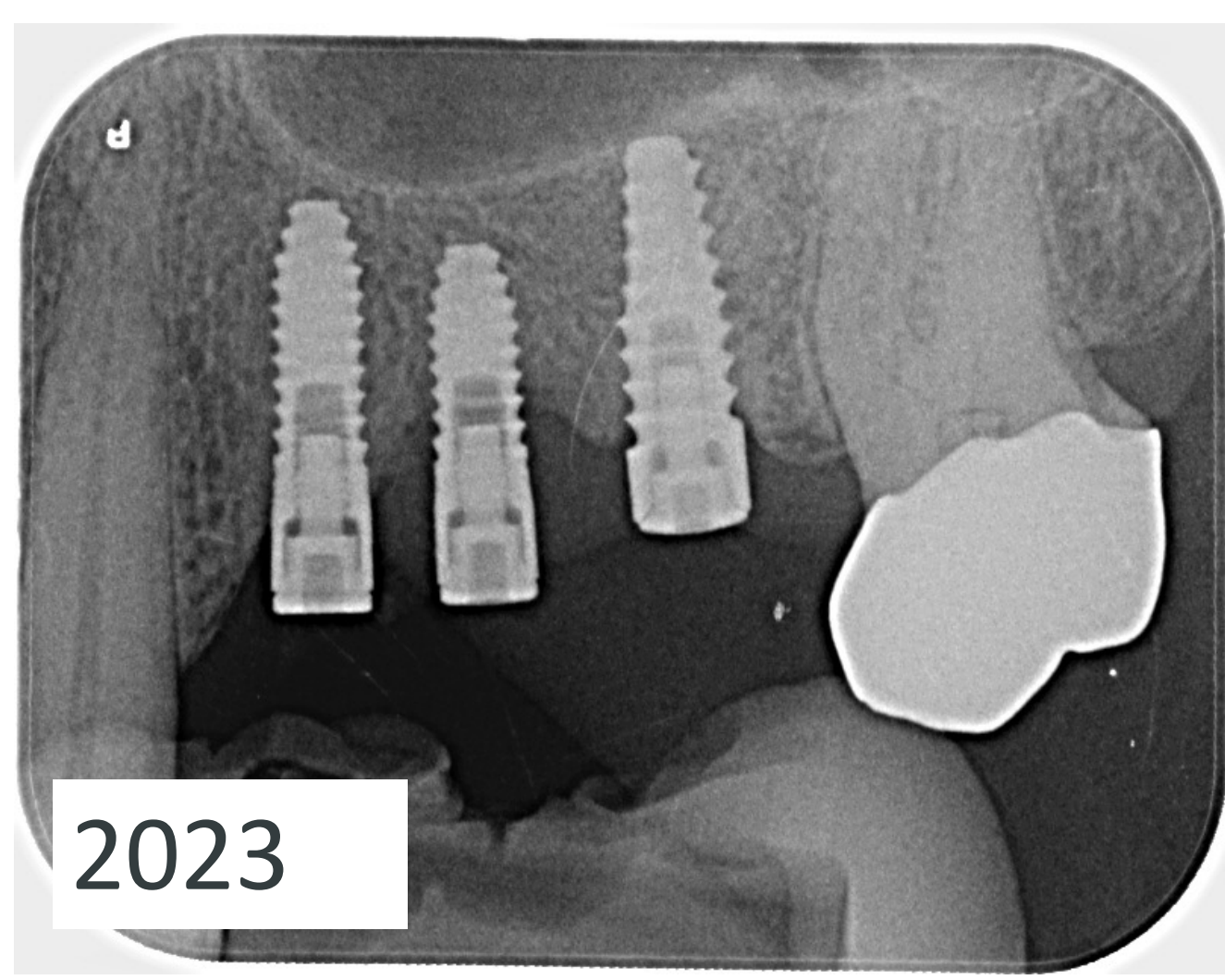
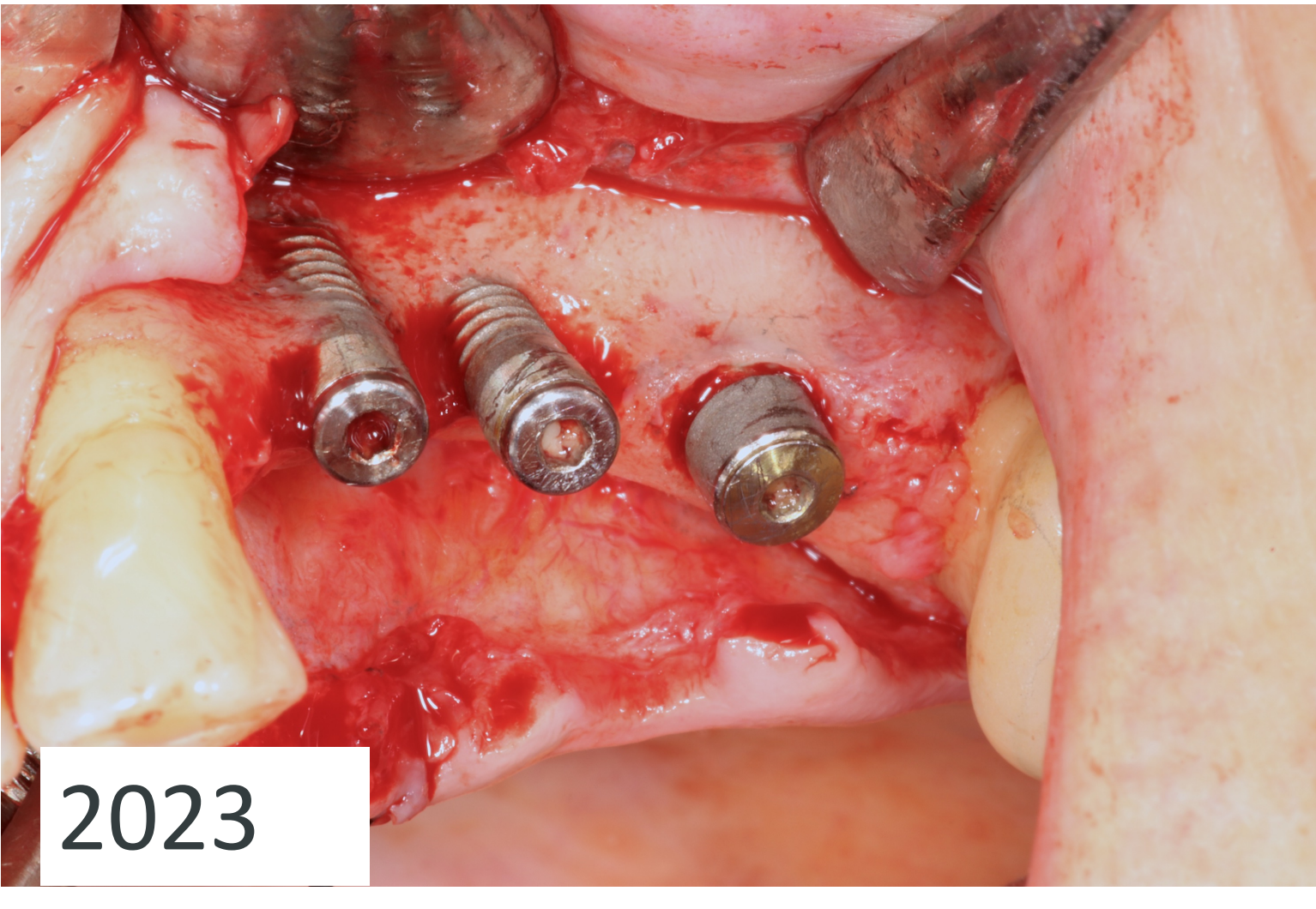
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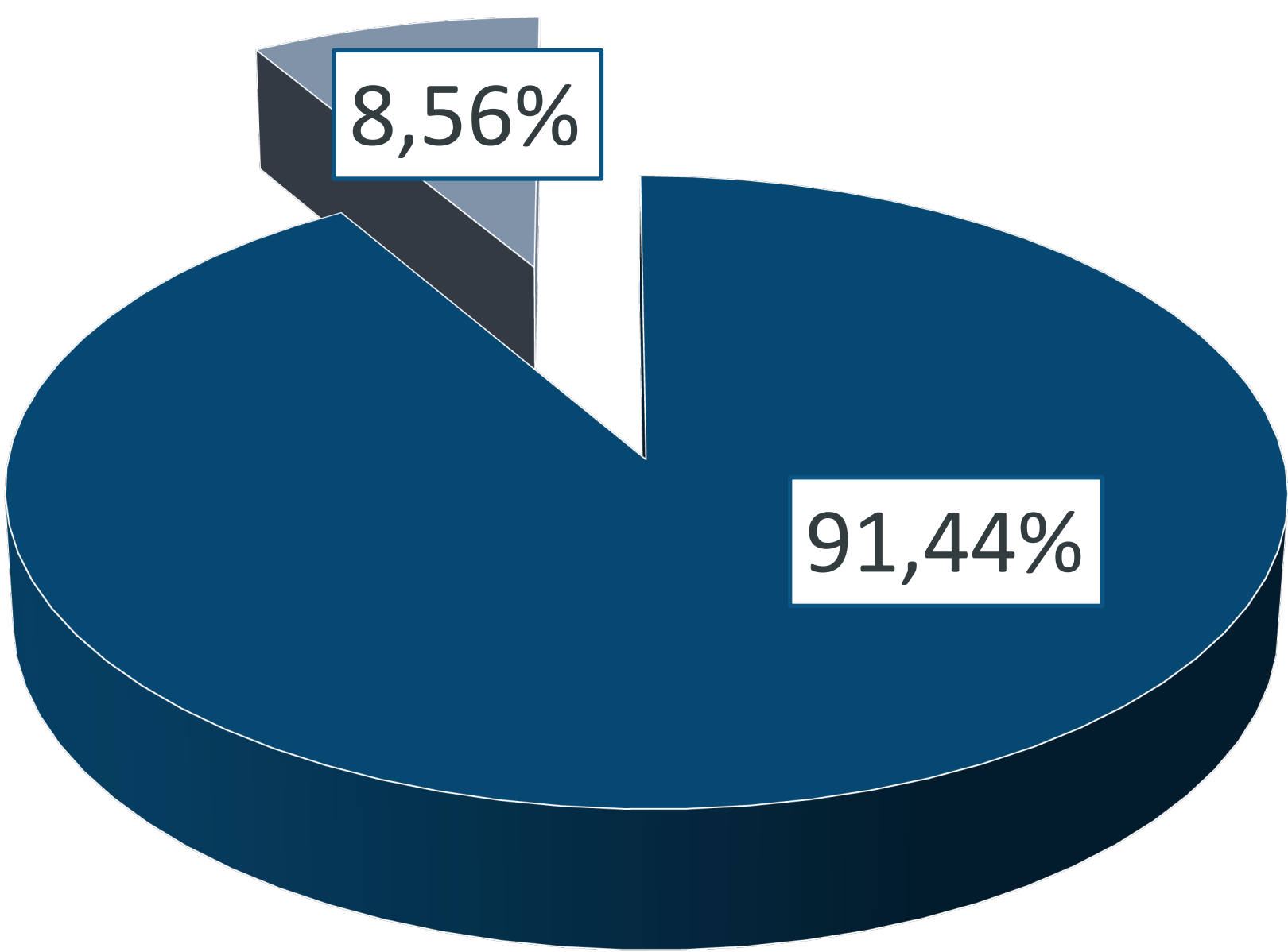
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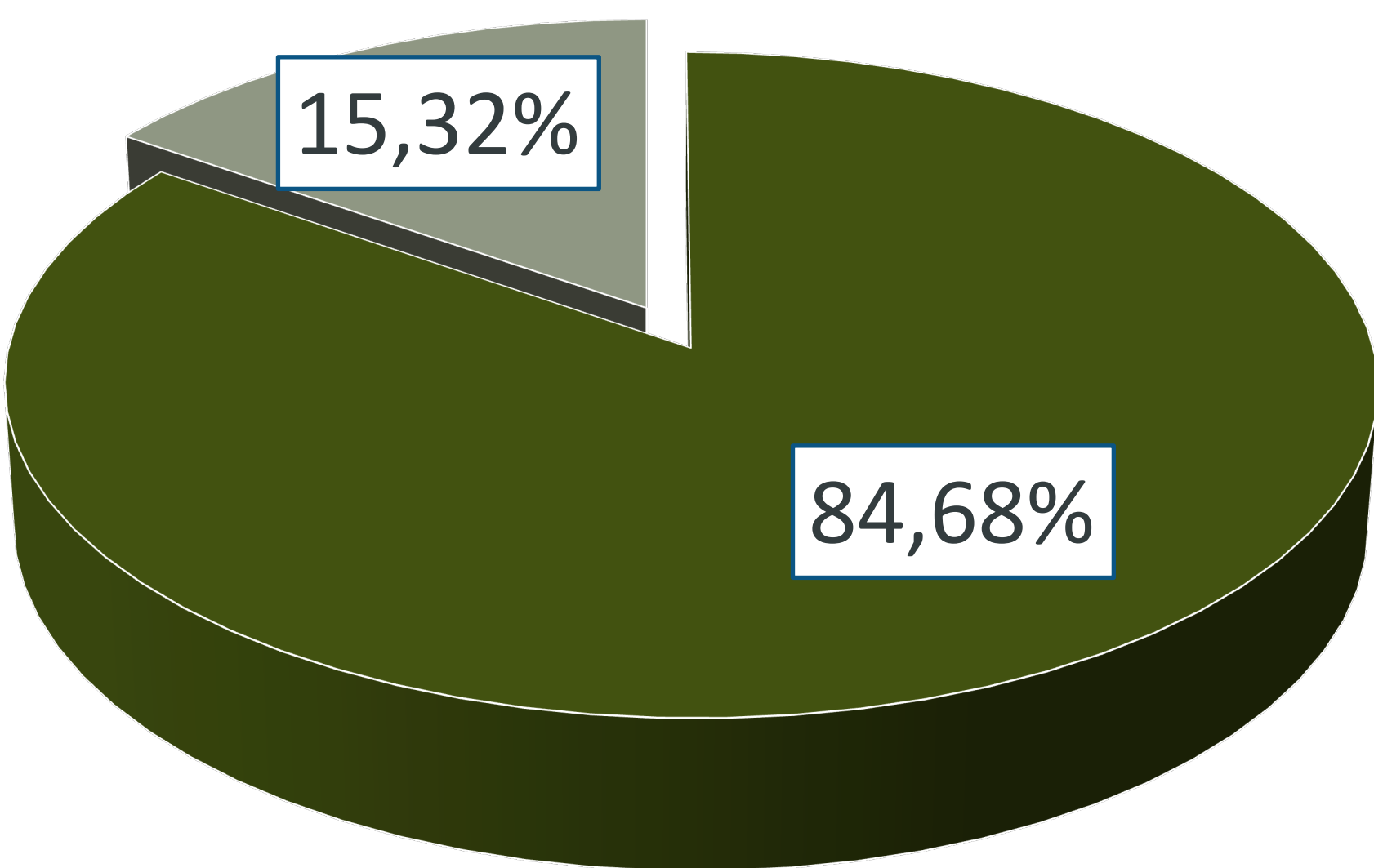
RESULTS

Implant survival: presence of the implant in the mouth, absence of mobility, absence of fracture, and radiographic bone loss less than 2/3 of the implant length.

Implant success: surviving implant, absence of suppuration, pain or paresthesia, and mesial or distal radiographic bone loss less than 3 mm.



■ Survival Implant



■ Success Implant ■ Failed Implant

CONCLUSION

It was found that a considerable prevalence rate of peri implant diseases in the studied population. A strong association was found between periodontitis, smoking, diabetes and peri-implantitis. Maintenance therapys seem to have a protective effect.

The limitations of this study necessitate a cautious interpretation of the results.. It is anticipated that approximately 53 out of every 100 implants will exhibit mucositis, and 14 out of every 100 implants will develop periimplantitis within a 5-year period. Although mucositis is a reversible condition, the prevalence is noteworthy, especially considering its potential progression to periimplantitis.

It is necessary to increase the number of participants in the study, as well as their quantity and rigor, to provide more valid conclusions regarding the nature of the disease.

Despite the limitations and challenges encountered in this study, its epidemiological significance must be emphasized. It sheds light on a previously overlooked reality of periimplant conditions in patients operated on at least 5 years ago in the Implantology postgraduate program at the University of the Andes.

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Periodontitis/peri-implantitis	Diabetes /peri-implantitis	Smoking/Peri-implantitis	Maintenance/Peri-implantitis
Statistically significant difference OR of 3.17 (IC 1.24-8.12) RISK FACTOR	Strong statistically significant difference OR de 7.75 (IC 2.31-25.95) RISK INDICATORS	Mild statistically significant difference OR de 2.33 (IC 1.01-5.37) RISK INDICATORS	PROTECTOR FACTOR