



Universidad de
los Andes

SURVIVAL AND SUCESS ASSESSMENT OF SHORT IMPLANTS. A 5 TO 6 –YEAR RETROSPECTIVE STUDY

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Postgraduate program of Oral and Maxillofacial Implantology, Diagnostic and Surgical Sciences department, Faculty of Dentistry,
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INTRODUCTION

Edentulism, both partial and total, is a highly prevalent issue globally. Dental implants provide a predictable solution with sufficient scientific evidence. Due to the atrophy of alveolar processes resulting from tooth loss and the inability to use implants of traditional length, short implants have emerged, defined as those with a length less than 10 mm. Despite their advantages, there is a lack of sufficient long-term studies, with 5 or more years of follow-up, to accurately describe their behavior.

Also, there is a deficiency of data showing the behavior of this treatment modality in the Latin American population.

GENERAL OBJECTIVES

Assessing the success and survival of short and extra-short implants installed in the implantology postgraduate program at the Universidad de los Andes with more than 5 years in function.

SPECIFIC OBJECTIVES

1. Evaluate biological, surgical, technical, and/or prosthetic complications in short and extra-short implants.
2. Compare success and survival in short and extra-short implants with regular implants.



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BACKGROUND

The prevalence of non-functional dentition (presence of fewer than 20 teeth) in Chile is 27%, according to the national health survey conducted in the year 2016-2017.

Ministry of Health, Chile, 2018.

The alveolar process is a tooth-dependent tissue that develops in conjunction with dental eruption. As a consequence of tooth loss, the alveolar process undergoes atrophy.

Schoreder, H.-E. Handbook of Microscopic Anatomy. VolIV/5(1986).

The majority of bone loss occurs horizontally, while vertical bone loss is more pronounced in the buccal plates.

Lekovic V et.al, Journal of Periodontology (1970).

STRATEGIES TO ADDRESS BONE LIMITATIONS



Sinus Lift



Bone grafts



ROG



Bone distraction

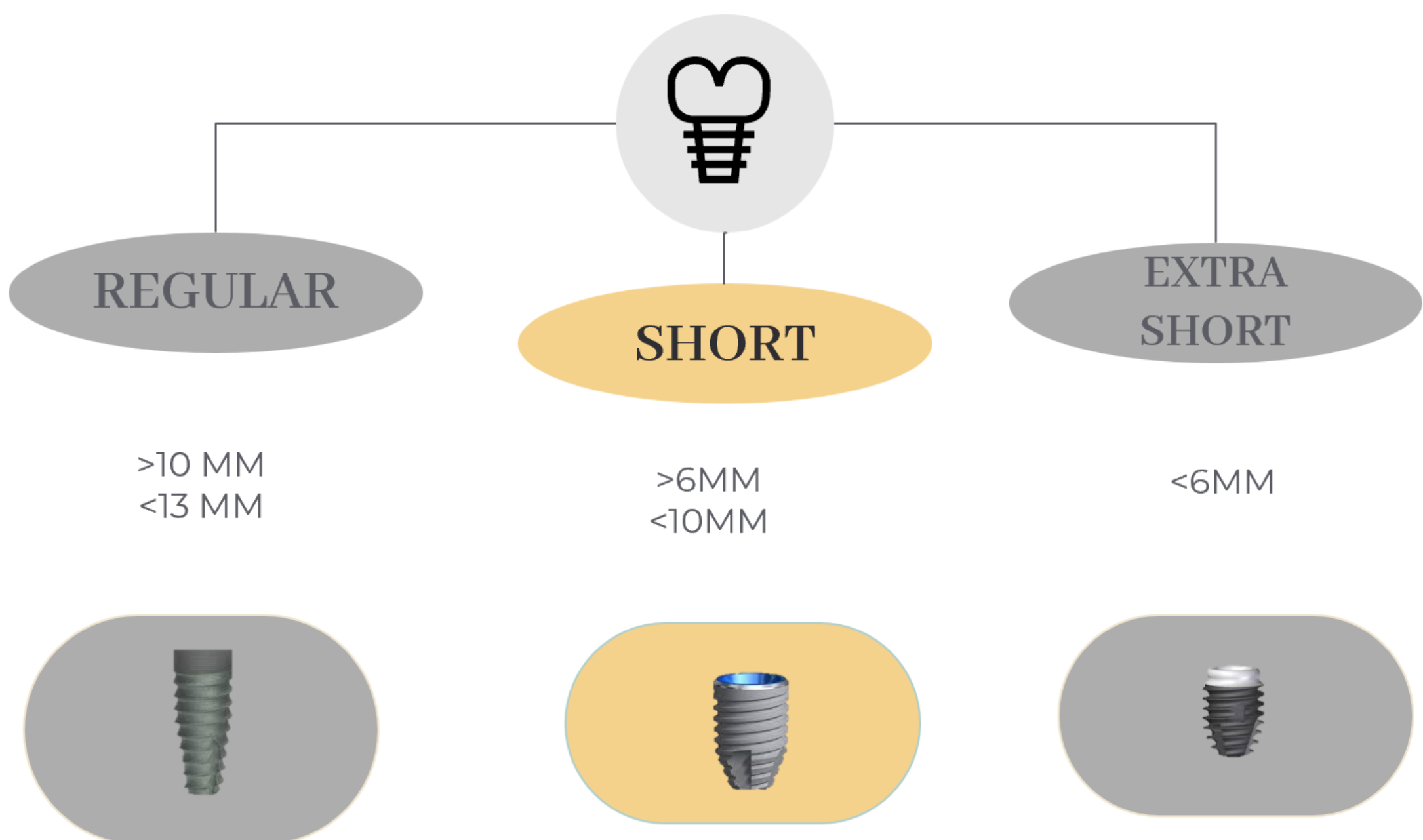


Lateralization of the Inferior Alveolar Nerve



Zygomatic Implant

AL-JOHANNY CLASIFICACION 2017

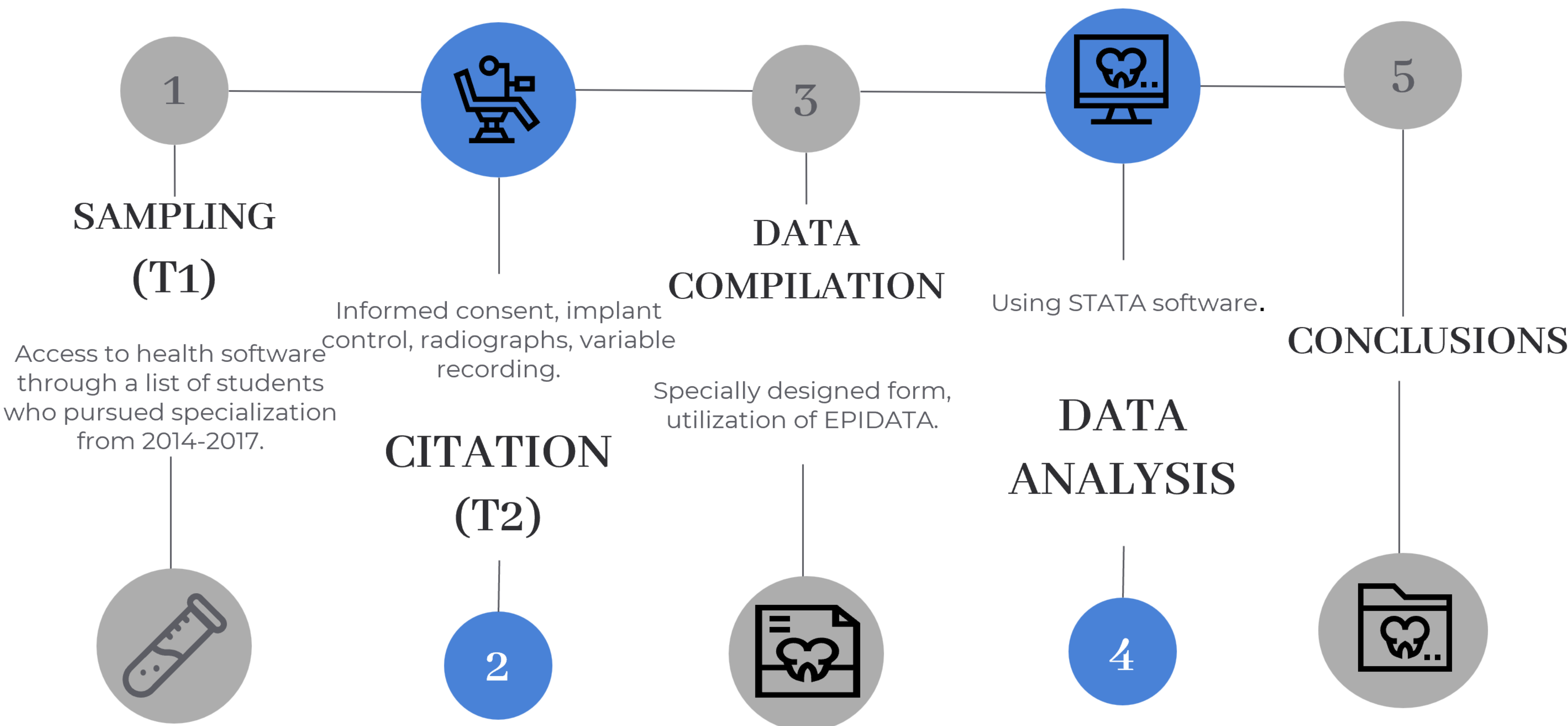


SHORT/ EXTRA-SHORT

METHOD AND MATERIALS

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.





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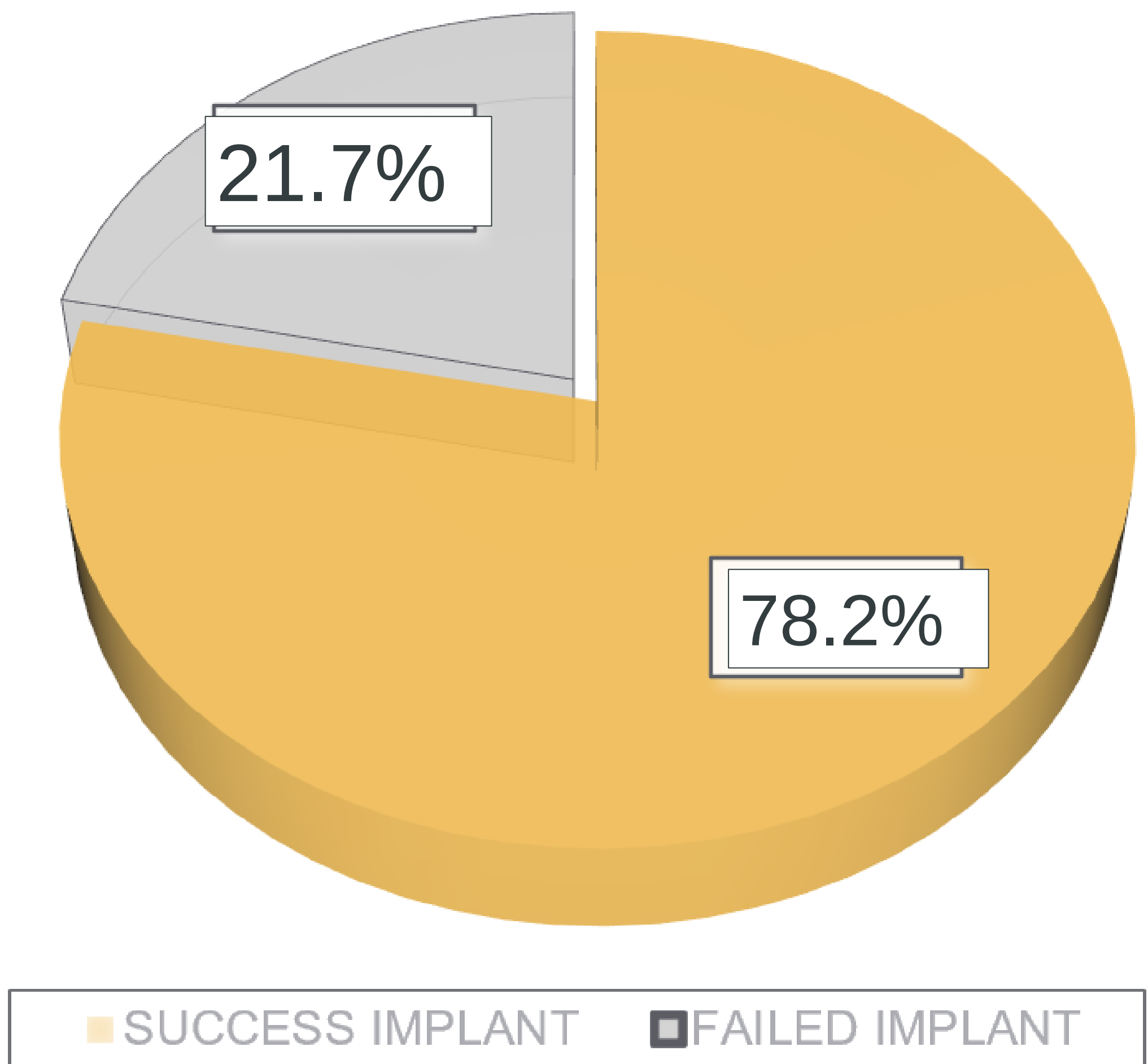
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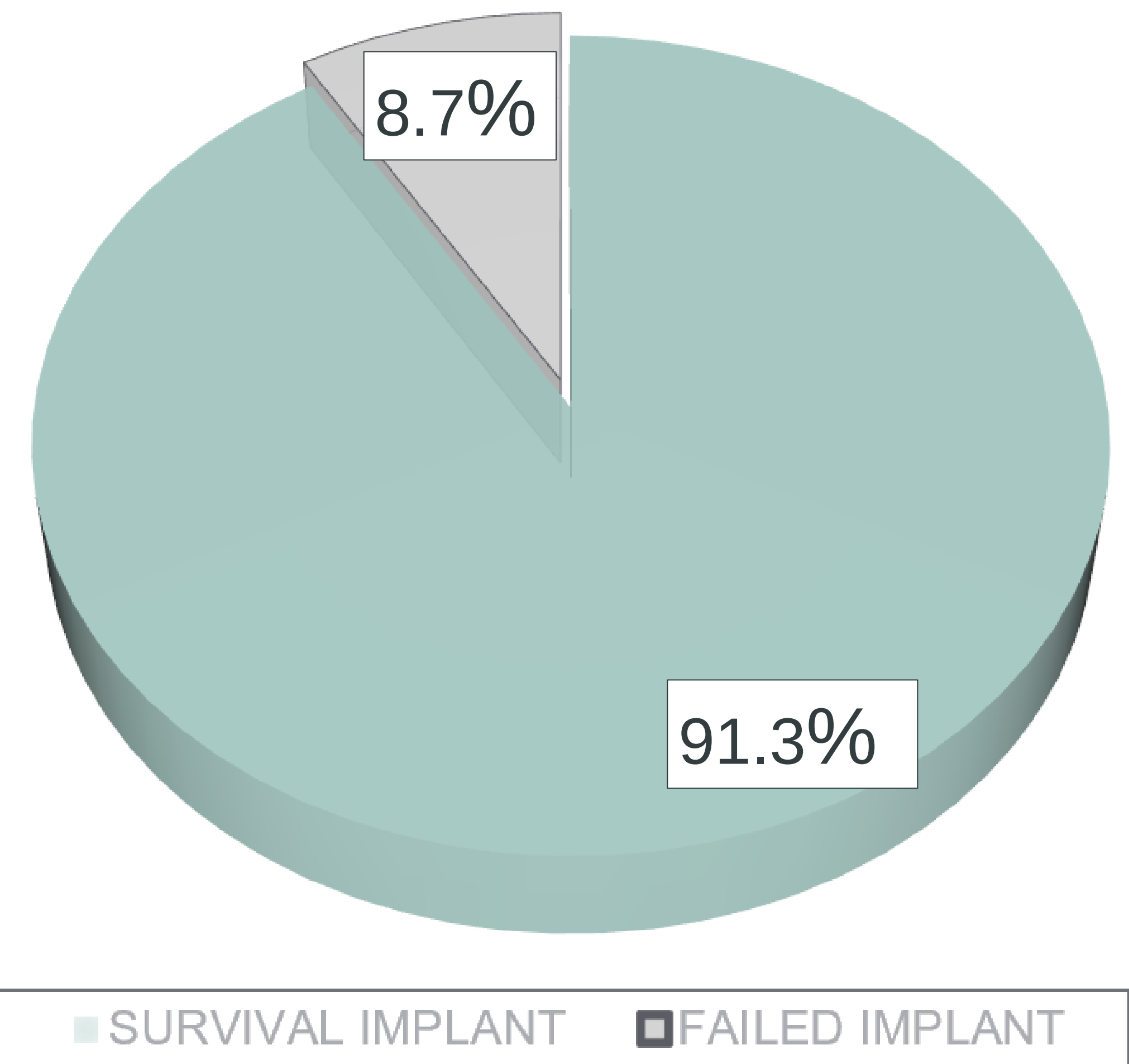
RESULTS

SUCCESS



**SUCCESS RATE OF 78.2%.
(95% CI 66-87)**

SURVIVAL



**SURVIVAL RATE OF 91.3%.
(95% CI 82-97)**

69 SHORT OR EXTRA-SHORTS IMPLANTS

THE MEAN FOLLOW-UP TIME FOR THE IMPLANTS WAS 6,47 ±1.02 YEARS

THE MEAN REHABILITATED YEARS WERE 5,6 ±1.39 YEARS

15 IMPLANTS FAILED

**60 SHORT IMPLANTS
9 EXTRA-SHORTS IMPLANTS**

11 SMOKERS

Evaluation at T1:

657 Implants
106 Short or extra-short implants

Evaluation at T2:

215 Implants
69 Short or extra-short implants
34 patients
Median of 5.5 ± 4 implants per patient.
6 implants were categorized as lost due to their absence.
8 implants showed bone loss ≥3mm, with 2 of them having bone loss greater than 2/3 of their length,

Median age of the patients was 60.85 ± 7.92 years.

8 patients were men.
26 patients were women.
12 patients were ASA I.
22 patients were ASA II.

The most frequent diseases were

Hypertension (23.52%)
Dyslipidemia (14.71%)
Depression (11.46%).

11 patients were smokers, including 1 heavy smoker.

23 patients had bruxism.
19 patients were diagnosed with periodontitis.



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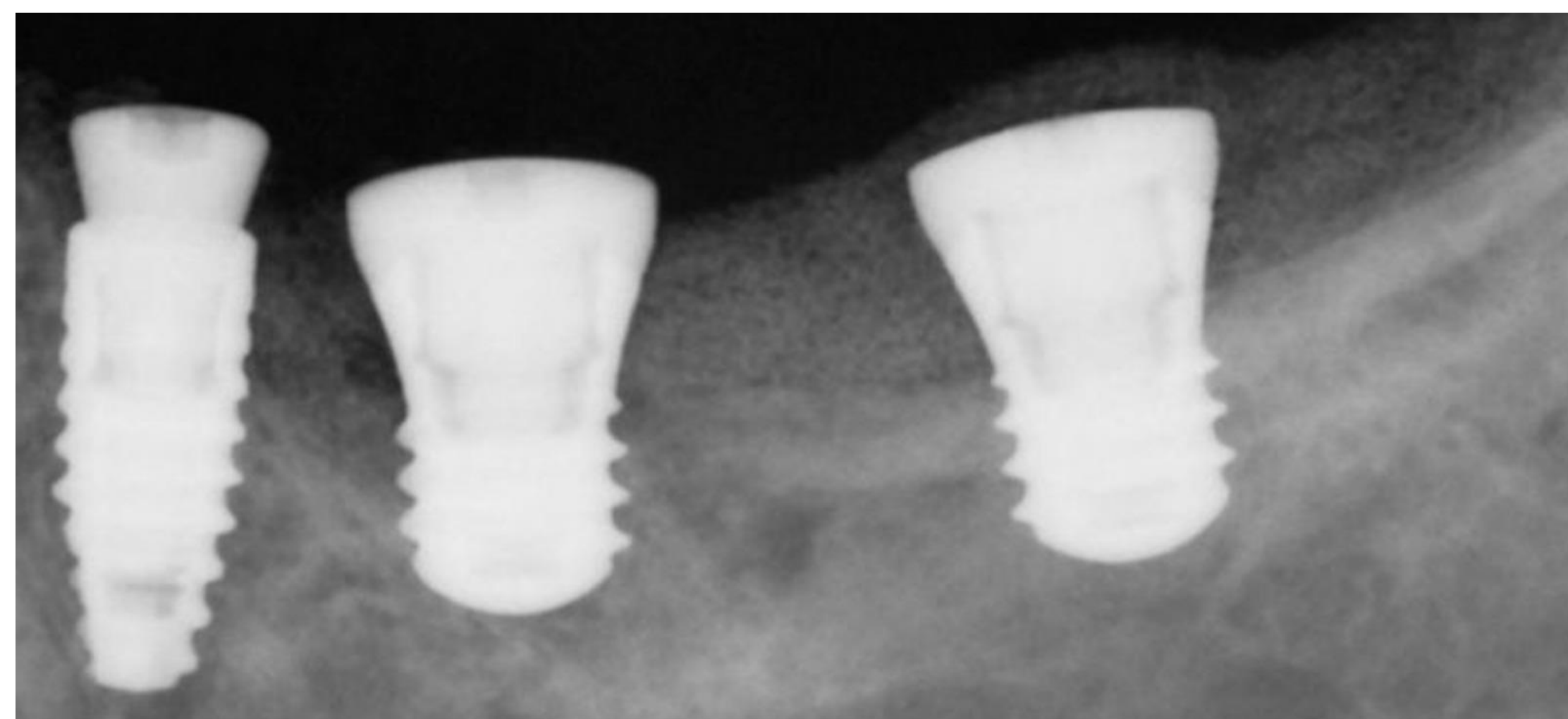
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DISCUSION

- The study revealed a **91.3% survival rate** and a **78.2% success rate** in short and extra-short implants (**N=69**) during a 5 to 6-year follow-up.
- The study **indicated higher failure rates in the posterior mandible** and associations with native bone, screw-retained rehabilitations, conical designs, bruxism, and plural rehabilitations.
- Comparisons with regular-length implants **showed no significant differences** in survival or success rates.
- A **history of periodontitis** is a crucial factor in the success and survival of short and extra-short implants.
- Smoking patients were not associated with risk of failure in short implants, however, **100% of heavy smokers** presented peri-implantitis in this study.



CONCLUSIONS

- ✓ Short and extra-short implants are a valid option in the treatment of atrophic maxillae, as they exhibit a high survival rate after a 5-year follow-up (91.3%).
- ✓ A history of periodontitis is a crucial factor in the success and survival of short and extra-short implants.
- ✓ Short and extra-short implants showed similar success and survival rates compared to regular-length implants.
- ✓ Despite the limitations of this study, its importance should be emphasized, given the limited existing literature that provides medium-term follow-up on short and extra-short implants.

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