

# Immediate, Immediate-delayed and Late Implant placement

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## 연자약력

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## Introduccion

The Frialit-2 system (Friadent, Mannheim, Germany) is a further development of the former Tübingen immediate implant made of Al<sub>2</sub>O<sub>3</sub> ceramic. (Frialit-1 immediate implant) and has been available since its introduction in 1990 as the stepped screw and stepped cylinder. The main rationale behind the Frialit-1 immediate implant was to prevent the atrophy of the alveolar process by placing implants as early as possible after tooth loss.

## Material and Methods

The present study investigates 1508 stepped screw implants (gritblasted and acid-etched surface) placed in 714 patients between August 1990 and October 2000. The youngest subjects had an age of 14, the eldest patient was 90 years old. The age mean was 43 years. The surgical technique first published by Schulte and Heimke (1976) for use with the Tübingen Ceramic-Implant (Frialit-1) was modified and adapted for use with the Frialit-2 screw-implant. In 29% of the cases tooth loss was due to advanced periodontitis. Unsuccessful endodontic treatment represented 17% of the cases. Implants replacing teeth lost due to caries were less frequent (10%). In 9% of the cases, tooth loss was due to trauma. In cases of agenesis, 6% of the implants were placed. 6% of the implants were inserted because of implant fractures of ceramic implants. In 0.3% of the cases (n=5) the reasons for tooth loss were internal granuloma. Thirteen percent of the implants were inserted immediately or up to 6 days after tooth extraction, twenty-five percent were placed between the 7th day up to 9 months after extraction, sixty-two percent were late implants. Implants of varying diameters and lengths were used to cover a wide range of surgical indications in both the maxilla and mandible. Single-tooth replacement was performed in 30 % of the cases.

## Results

The statistical analysis according to Kaplan-Meier revealed a 93% survival rate