Question

State of the Science Implant Dentistry

What is the effect on outcomes of time-to-loading of a fixed or removable prosthesis placed on implant(s)?

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Data Collected

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- <u>Criteria for non-inclusion of papers</u>
- Any attempt of comparative analysis with regard to time-to-loading

- <u>Criteria for non-inclusion of papers</u>
- Anecdotal reporting of results
- Cross-sectional & case-control study & «failing implants studies»
- Report limited to description of techniques for provisional fabrication
- Observation period less than 1 year
- Journal is produced by manufacturer
- Less than 5 patients
- Abstract only
- Old Technology (i.e. pre 1985)
- Posthoc analyses of previous reports
- Single technique case series without any element of comparisons

Summary of Papers Used /Available
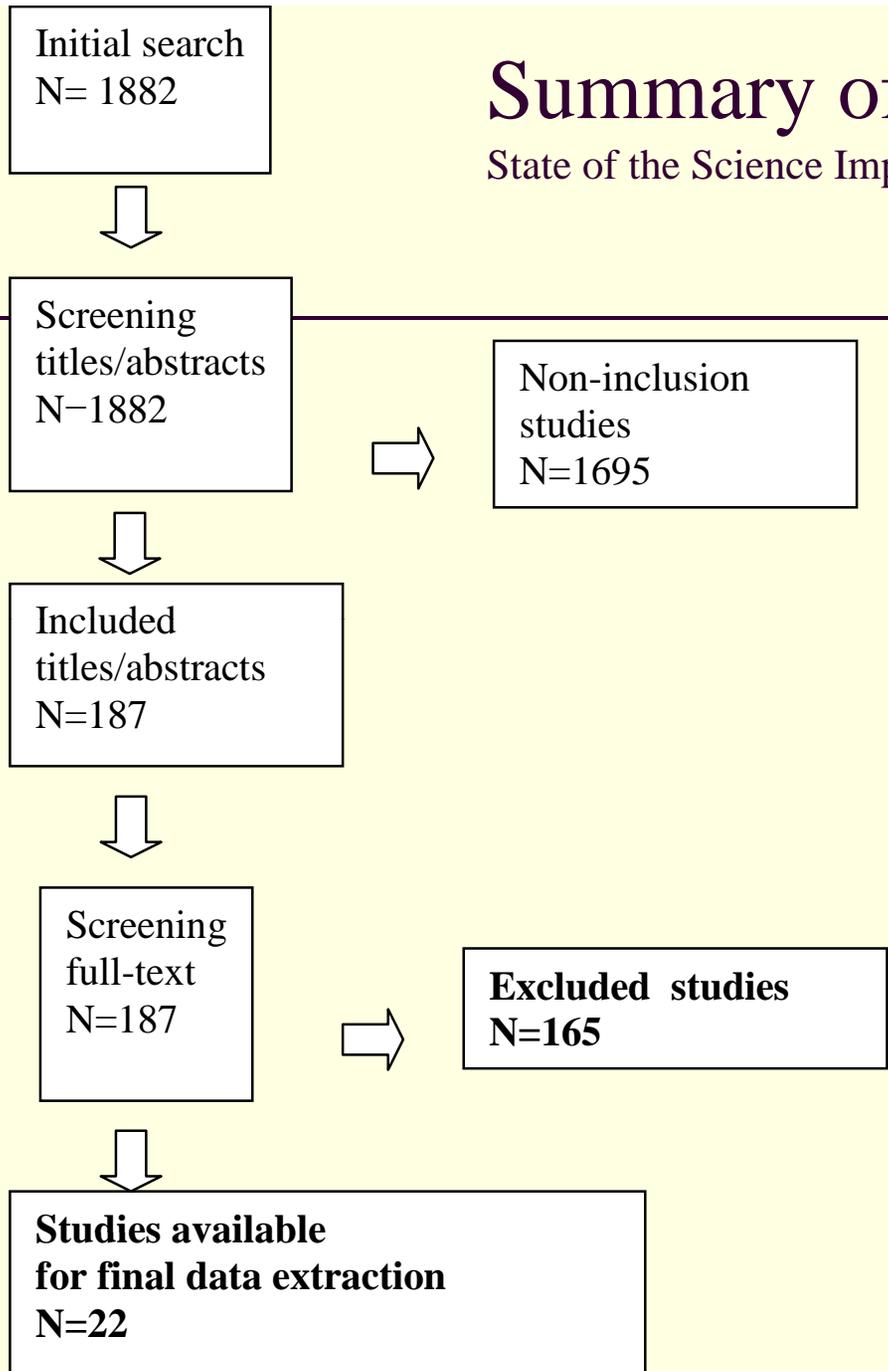
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Initial search
N= 1882

Screening
titles/abstracts
N−1882

Non-inclusion
studies
N=1695

Included
titles/abstracts
N=187

Screening
full-text
N=187

**Excluded studies
N=165**

**Studies available
for final data extraction
N=22**

Summary of Papers Used /Available

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Initial search N= 1882	

⬇

Screening titles/abstracts N=1882	⇨ Non-inclusion studies N=1695

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Included titles/abstracts N=187

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Screening full-text N=187	⇨ Excluded studies N=165

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Studies available for final data extraction N=22
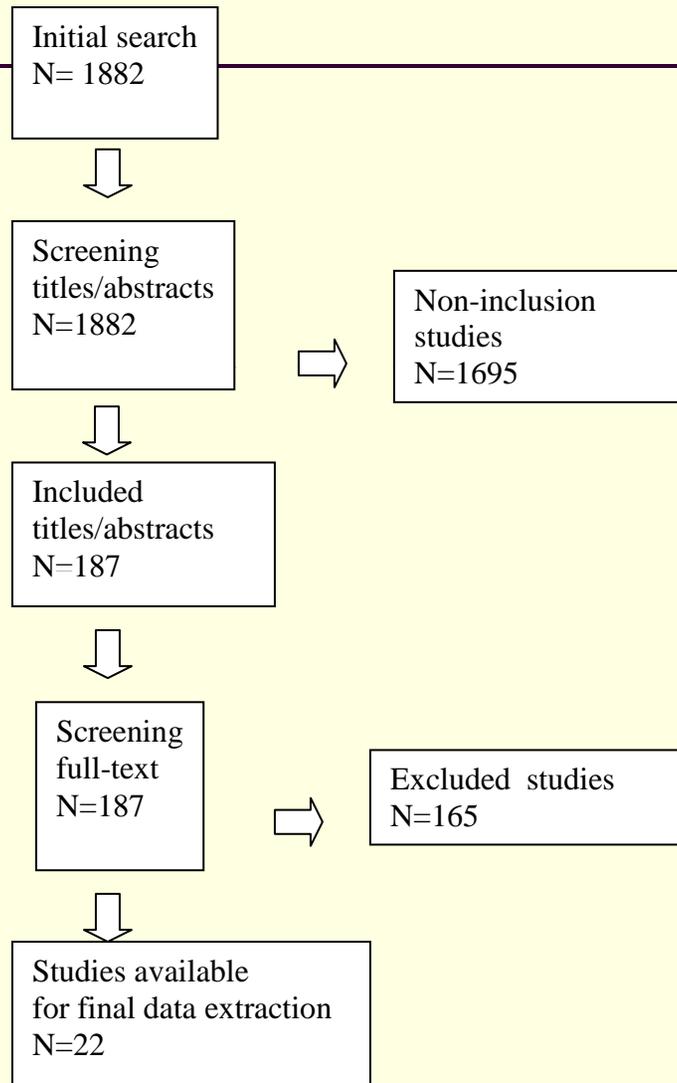
A. Reasons for excluding studies (N=165)*

Absence of comparative control group	112
Anecdotal and ambiguous reported	35
Less than 5 patients	18
Old technology reported	13
Less than 1 year observation period	11

•some studies excluded for multiple reasons

B. Methodology of studies included (N=22)

RCT Randomized controlled trial	6
RCT Randomized controlled trial-split mouth	1
Prospective study w/ concurrent controls	7
Prospective study w/ concur submerged implants	6
Retrospective study w/ concurrent controls	2

How Did You Select Paper Inclusion/Exclusion Criteria?

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- **Review authors used forced decision for inclusion & exclusion**

Characteristics of excluded papers (n=165)

Authors Title Source	Study aim (sic)	Exclusion reason
1. Aalam AA, Nowzari H, Krivitsky A Functional Restoration of Implants on the Day of Surgical Placement in the Fully Edentulous Mandible: A Case Series Clin Implant Dent Relat Res 2005; 7: 10-16	Report the clinical experience and outcome of a study of the functional rehabilitation of 16 completely edentulous mandibles with immediately loaded cross-arch screw-retained hybrid prostheses at the University of Southern California.	Single technique case series
2. Abboud M, Koeck B, Stark H, Wahl G, Paillon R Immediate loading of single-tooth implants in the posterior region Int J Oral Maxillofac Implants 2005; 20: 61-68	Evaluate the clinical response and safety of immediately loaded single-tooth implants placed in the posterior region of the maxilla and mandible	Single technique case series
3. Ahn MR, An KM, Choi JH, Sohn DS Immediate loading with mini dental implants in the fully edentulous mandible Implant Dent 2004; 13: 367-	Evaluate the efficacy of 27 provisional dental implants	Insufficient observation period (< 1 year) & Single technique case series

Findings (n= 22)

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Size and quality of papers
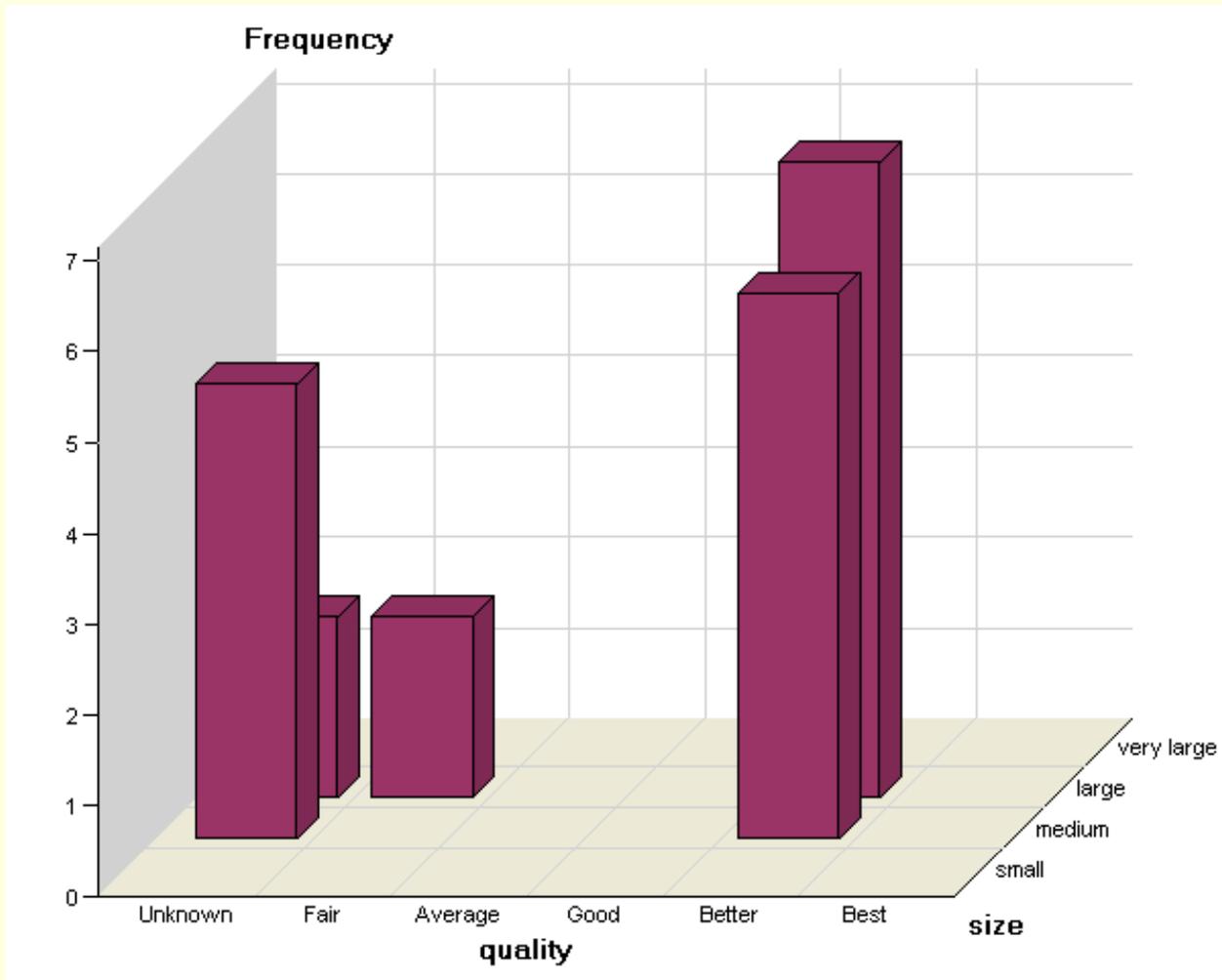
Proportion estimates
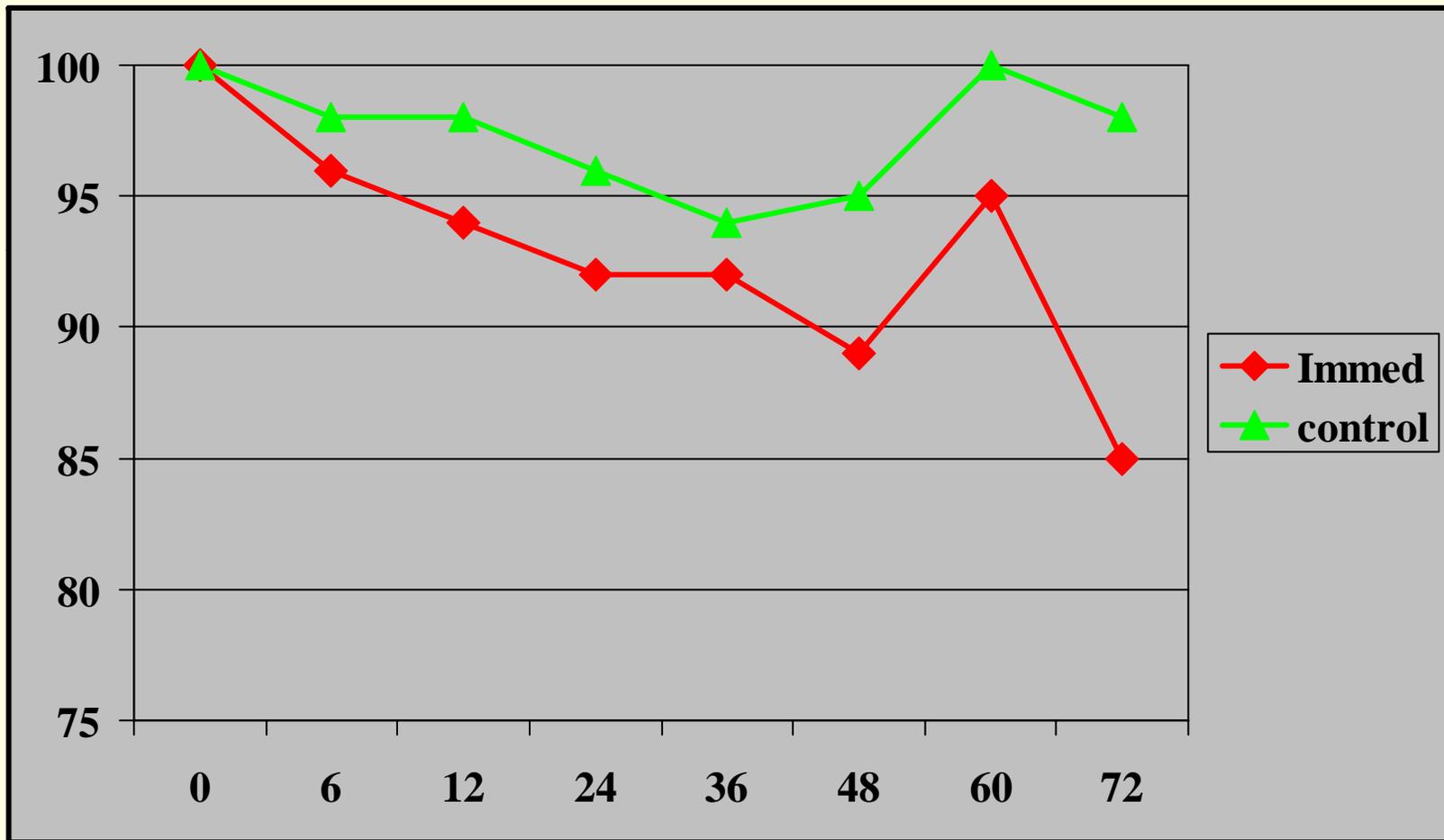
Summary of Quality of studies (n=22)

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Variables which describe the study as a whole (and the publication)

Variables which describe each treatment employed in the study

Outcomes for each treatment employed in the study

Great heterogeneity amongst the studies regarding independent and dependent variables → interpretation of data?

Other Findings (n= 22)

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Treatment outcomes described in papers on immediate loading (n=22)

Failure, according to criteria described by 1986 Albrektsson et al*; 6 papers
- Chiapasco et al
- Ibanez et al
- Romeo et al
- Røynesdal et al
- Testori et al (2003a)
- Testori et al (2003b)

Failure, according to criteria described by 1990 Albrektsson & Sennerby*, 1 paper
- Schnitman et al (1990)

Failure, according to criteria described by 1994 Albrektsson & Isidor*, 1 paper
- De Bruyn et al

Failure, according to criteria described by 1997 Buser-et al & 2002 Cochran et al*, 2 papers