

*Toronto Academy of Dentistry Winter Clinic.
Nov 4, 2011*



*Clinical Research by the UofT
Prosthodontics Graduate Residents of
Importance for the Practicing Dentist*

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Greetings from the current and past Graduate Prosthodontics Residents!



Focus of presentation

Present relevant findings of recent and current clinical research undertaken by the graduate residents in the University of Toronto Prosthodontics Specialty Program.



Critical appraisal of the Scientific Literature 2005 →

The following 4 articles were edited and critically appraised by Dr. Asbjørn Jokstad and the residents of the University of Toronto graduate prosthodontics and periodontology programs.



Home

JCDA Express Issue 5, 2011

Posted on July 15, 2011

Tags:

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A member service that keeps you up-to-date on important new literature relevant to your practice.

JCDA has once again partnered with members of the graduate prosthodontics and periodontology programs at the University of Toronto faculty of dentistry, headed by Drs. Asbjørn Jokstad and Jim Lai respectively. Under the guidance of Dr. Jokstad, a JCDA editorial consultant, these residents provide their critical appraisal of recent articles of interest in the prosthodontics and periodontology literature.

You can read a [brief message](#) from Dr. Jokstad, in which he explains the genesis, format and rationale of the department's literature review seminars.

JCDA would like to gratefully acknowledge the publishers of the selected articles, who have granted free access to the full-text papers until August 14, 2011. Follow the links in the Notes and News sidebar to discover more about these publications.

Yours sincerely,

Dr. John P. O'Keefe
Editor-in-chief
jokeefe@cda-adc.ca



Dr. Danie graduate
Safil SH, **marginal periodont implant C**
Full-text

JCDA Clinical Pearl:

- Patients with a history of outcomes, such as incre failure, following implant

What is the main clinical ques

What is the risk for marginal bor subjects with a history of periodontium?

What is the current clinical "s

There may be an increased risk history of periodontal disease.

Why is it important for the clin

Patients with a history of tooth deserve to know all the risks they do to minimize their risk. For ins the implants is one risk associat

What is the main conclusion c

There is a moderate amount of periodontitis are at greater risk f

What is your assessment of th evidence?

This is a high-quality systematic much crestal bone loss in patier failure, the range is 0% to 3.3% who are periodontally compromi

For implant survival, the results Some of the studies did not clea participants. These are known fa confounded the results of the m

What should a clinician take a impact on clinical practice?

Clinicians can advise patients w may have a slightly greater risk maintaining a healthy periodonti

What is the main clinical q

What is the efficacy of intrac temporomandibular disorder

What is the current clinica

There are several types of a appliances made of hard an bite appliances. Despite the and efficacy in a clinical sett

Why is it important for the

The large number of applian accompanying manufacture shows relative advantages t

What is the main conclusi

Hard stabilization appliances treatment of TMD pain comp The hard stabilization applia pharmacological and acupur with some other appliances.

What is your assessment evidence?

The methodological quality o good evidence for optimal n

What should a clinician ta impact on clinical practice

The prudent practitioner can should monitor patients clos



Dr. C gradu
Waite
The r Dent
Full t

JCDA Clinical Pearl:

- Patients with missing retained partial remo tooth loss.

What is the main clinical q

How does the incidence of t shortened dental arch (SDA restored by replacing missin

What is the current clinica

Most studies on SDA restor trials, which conclude that tr planning. However, there is designed experimental stud

http://www.jcda.ca/article/jcda_express_is



Dr. Mohammed Zahran, a member of the University of Toronto graduate prosthodontics program, selected:

Hasanain F, Durham J, Moufti A, Steen IN, Wassell RW. **Adapting the diagnostic definitions of the RDC/TMD to routine clinical practice: a feasibility study.** *J Dent.* 2009;37:955-62.

Full-text access to this article has expired.

JCDA Clinical Pear

- The use of the feasible alter Temporomandibular inpatients su

What is the main c

What is the reliabilt temporomandibular

What is the current

The current gold sta for Temporomandib

Why is it important

The RDC/TMD was beneficial to have a practice.

What is the main c

The diagnostic capa provides a convenie clinical practice.

What is your asse evidence?

This cross-sectional measurement did n examiner repeat the

What should a clin impact on clinical p

The CEP-TMD can clinical setting.

Related Resources

Details on the RDC/ trndinternational.org provide history and



JCDA Express Issue 5, 2011 | JCDA | Essential Dental Knowledge

SDA restorations.

Why is it important for the clinical question to be answered?

The concept of an SDA may be a cost-effective option that can also provide an acceptable oral function for the patient.

What is the main conclusion of the paper?

Tooth loss and other clinical parameters are not (or only weakly) associated with the type of prosthetic treatment in SDA cases at the 3-year time point.

What is your assessment of the quality of the paper and the underlying evidence?

This is a well-designed 3-year randomized control trial. However, it would have been interesting if the authors included implant restorations as an intervention (the rationale for excluding this treatment is briefly addressed in the Discussion section).

What should a clinician take away from the study findings, in terms of potential impact on clinical practice?

According to the 3-year results, SDAs may be a cost-effective, reliable solution for patients. Clinicians should be aware of the importance of considering patient preferences in their clinical decision-making. Results from the 5-year time point are scheduled to be published at a later date.

Related Resources:

Other articles reporting on the same patient cohort include:

Luthardt RG, Marré B, Heinecke A, Gersch J, Aggstaller H, Busche E, et al. **The Randomized Shortened Dental Arch study (RaSDA): design and protocol.** *Trials.* 2010;11:15.

Wolfort S, Heydecke G, Luthardt RG, Marré B, Freesmeyer WB, Stark H, et al. **Effects of prosthetic treatment for shortened dental arches on oral health-related quality of life, self-reports of pain and jaw disability: results from the pilot-phase of a randomized multicentre trial.** *J Oral Rehabil.* 2005;32(11):815-22.

Message from Dr. Asbjørn Jokstad



The volume of new research literature is overwhelming. Colleagues apply different strategies to cope with this information overflow. At the U of T prosthodontics residency program, we've established a concept of collective responsibility for updating each other on the most groundbreaking research within the discipline.

During a lively 90-minute seminar held each week, 2 prosthodontics and 2 periodontology residents present and defend what they consider the best articles among 25 selected specialty publications. In a competitive yet friendly atmosphere, the articles are critically appraised and debated among the group.

The residents judge the articles on originality, novelty of analysis and clarity of presentation. They cover all aspects related to etiology, diagnosis, therapy, prevention and prognosis. Some of the selected articles present important new findings that dentists or the dental team could consider implementing into daily practice.

Working in consultation with JCDA, we will strive to bring Canadian dentists what we consider the most significant and relevant developments for practice within the field of prosthodontics as well as the prosthodontics-periodontology interface.

Asbjørn Jokstad, DDS, PhD
Head of prosthodontics, faculty of dentistry,
University of Toronto

Initiated 2011 - ongoing



- Small prospective cohort (n=10)
- *Evaluation of the Toronto Palatal Lift Appliance for patients with hypernasal resonance disorders*
- Student P.I. Dr. Brett Ayliffe
- Supervisors: Drs Tim Bressmann (Speech-Pathology Dep.) Majd Al-Mardini (PMH) & Professor Asbjorn Jokstad
- Funded by Prosthodontics discipline funds

Initiated 2011 - ongoing



- Simulation & Small prospective cohort (n=10)
- *Evaluation of the accuracy of NaviDent, a novel Dynamic Computer-guided Navigation System in dental implantology*
- Student P.I. Dr. Eszter Somogyi-Ganss
- Supervisors: Professor Asbjorn Jokstad, Ernest Lam (Radiology) & Howard Holmes (OMS)
- Funded by Claron Technologies, Toronto

Initiated 2011 - ongoing



- Retrospective cohort (n= ~100)
- *Long-term Complications Associated with Implant-retained Fixed Dental Prosthesis*
- Student P.I. Dr. Babak Shokati
- Supervisors: Professor Asbjorn Jokstad, Hasan Alkumru (Prosthodontics) & Eli Sone (Biomaterials)
- Funded by Nobel Biocare AG, Switzerland

Initiated 2011 - ongoing



- Retrospective cohort (n= ~300)
- *Retrospective analyses of patients with implant-retained partial fixed dental prostheses.*
- P.I. Professor Asbjorn Jokstad & University of Bern (U Bragger, D Buser & G Salvi)
- Funded by: ITI, International Team of Implantologists, Switzerland

Initiated 2007- ongoing

- Parallel 2-arm RCT (n=42)
- Implants placed: 2007 - 2008
- *Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles*
- 4 years results: IADR, Rio de Janeiro, 2012
- 3 years results: AADR, Tampa, FL 2012
- 1 year results: Sara Al-Fadda, PhD Thesis 2009
- Funded by: Nobel Biocare AG, Switzerland



Objective:

Appraise the feasibility of loading four mandibular implants with a fixed dental prosthesis (FDP) same day as the implant placement compared to waiting for four months healing.



Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles

Main Inclusion and Exclusion Criteria:

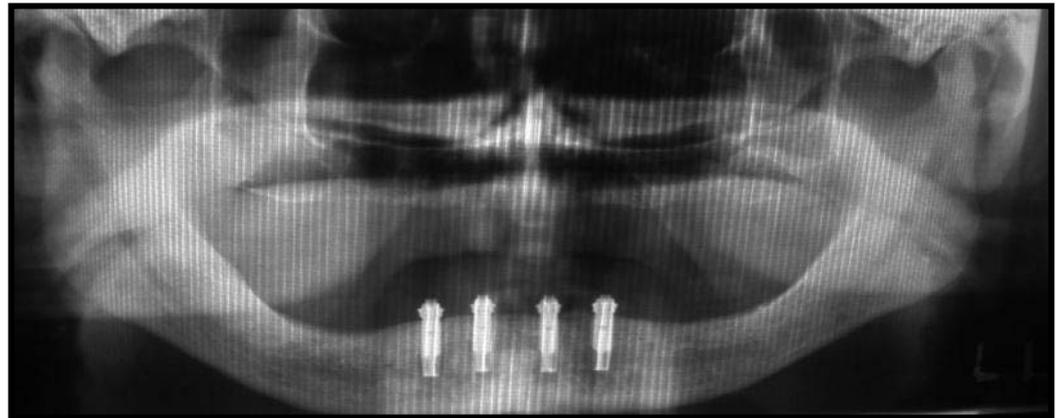
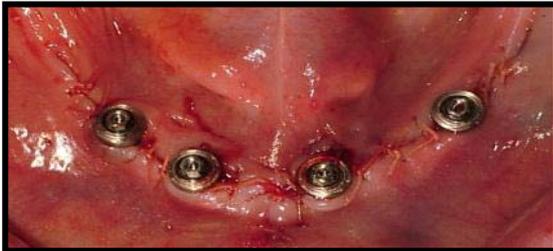
Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none">(1) Patient is ≥ 18 years of age or older(2) Edentulous in the mandible(3) Teeth extracted or lost ≥ 3 months prior to the date of implants placement(4) No bone augmentation procedure performed in zone one in the mandible(5) Bone quality and quantity allow placement of 4 dental implants, 3.75 mm in diameter and ≥ 10mm in length between the two mental foramina(6) Patient is committed to participating in the follow-up examination.	<ul style="list-style-type: none">1) Presence of physical or psychological disorders that preclude placement of dental implants2) Heavy smoking history (> 10 cigarettes /day)3) Use of investigational drugs, history of alcoholism4) Presence of physical handicap that would interfere with the ability to perform adequate oral hygiene.



Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles

Surgical protocol:

- All surgeries were performed by the same surgeon.
- Surgeries were performed following a standard protocol:
- Local anesthetic and antibiotic coverage used.
- 4 TiUnite dental implants (NobelBiocare[®], Gothenburg, Sweden) were placed between the mental foramina.
- Initial stability (20 Ncm).
- Randomization envelope opened after surgery.

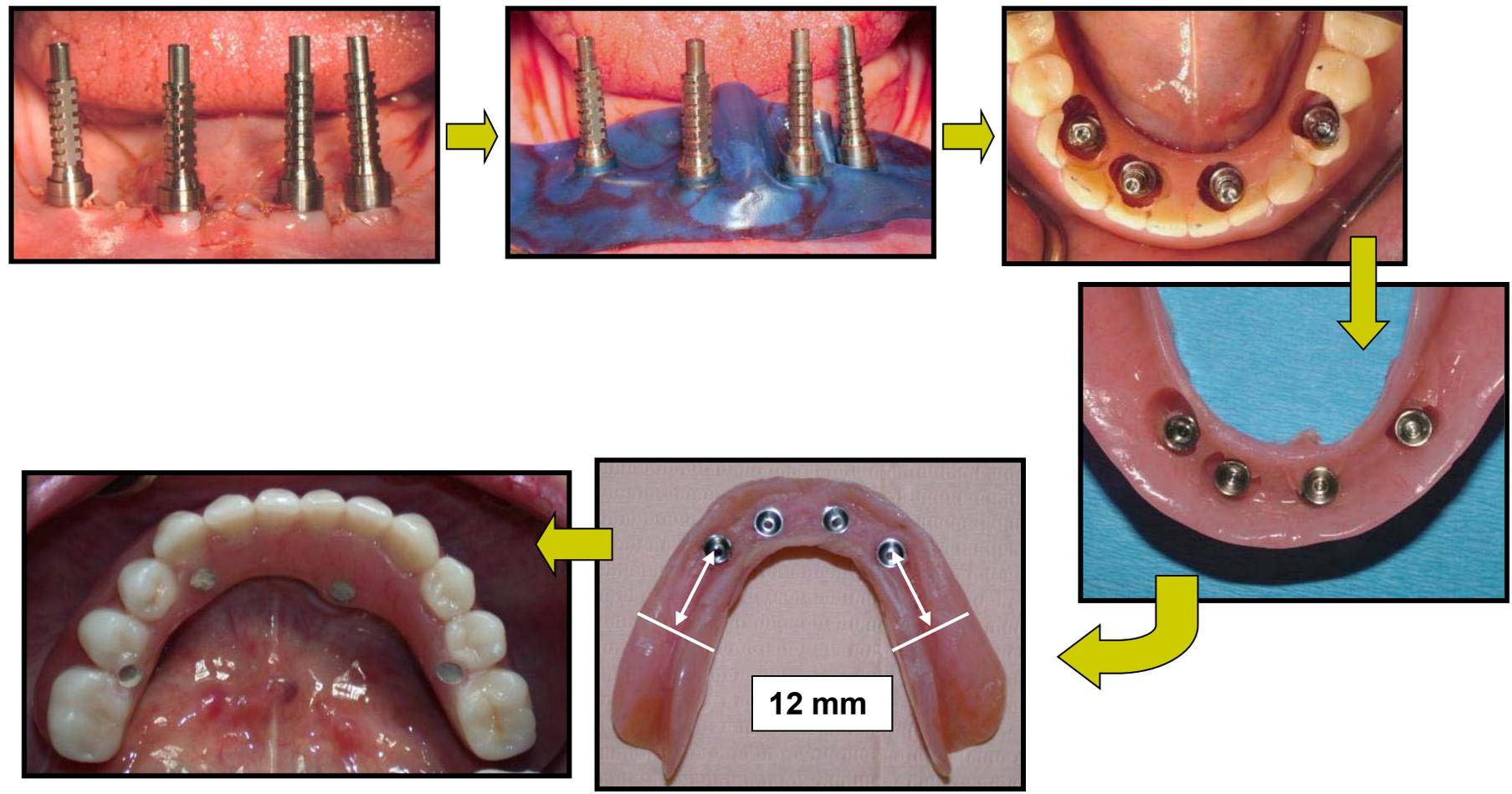




Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles

Immediate loading group:

Lower denture was converted into an interim fixed prosthesis.



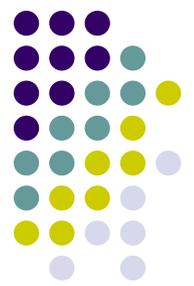
Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles



Immediate loading group:

- 4 standardized periapical radiographs were taken and coded to serve as baseline record.
- Permanent fixed prosthesis was fabricated fourteen days later.

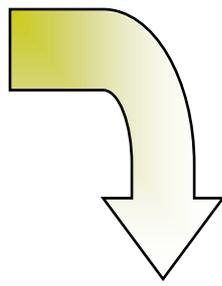
Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles



Control group:

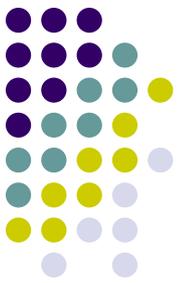


Healing abutments placed

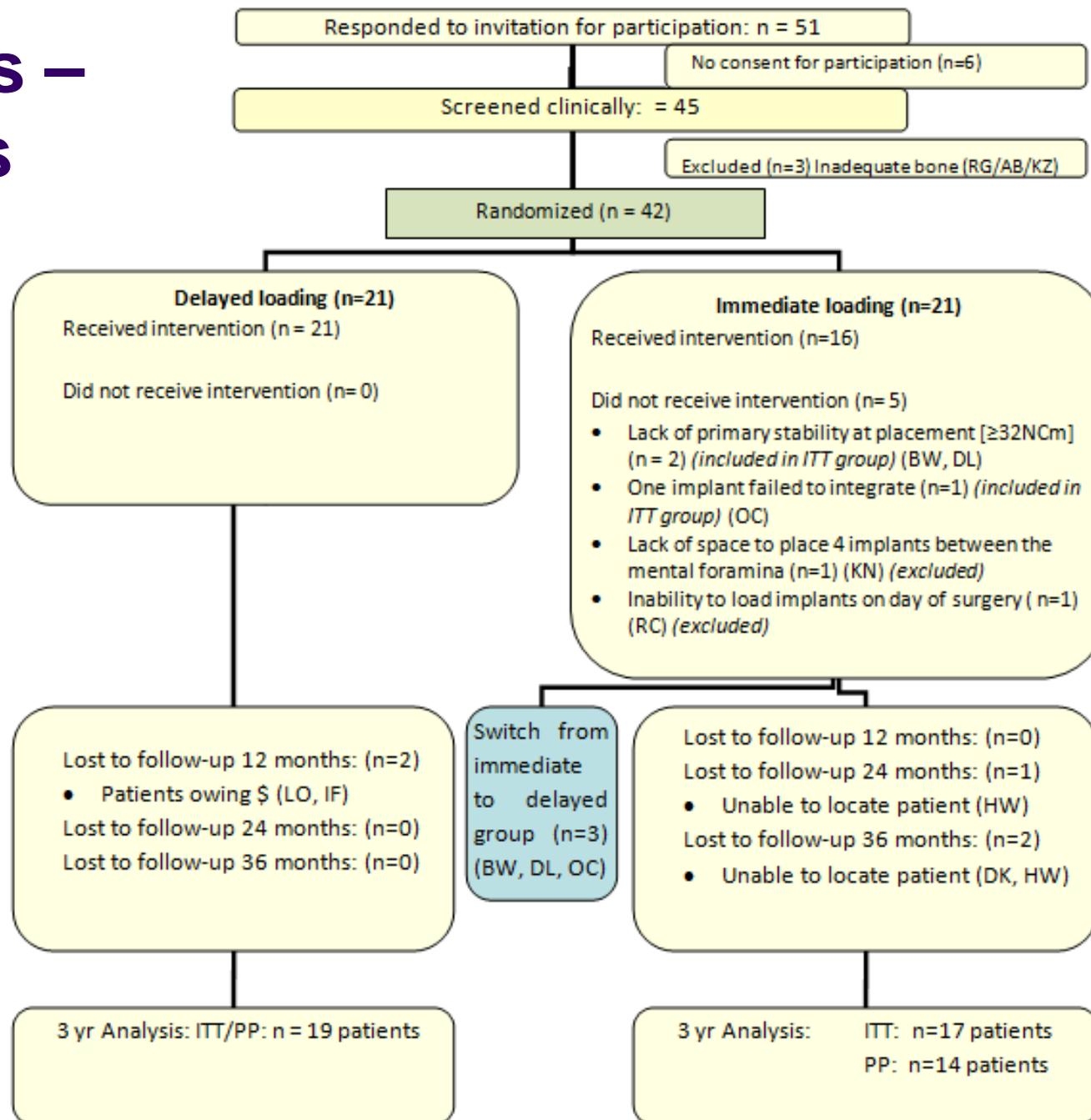


Permanent prosthesis (3 months post-surgery)

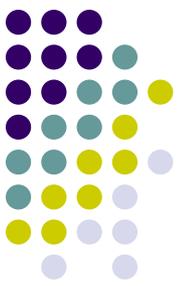




Results – 3 years



Immediate loading of a Fixed Dental Prosthesis in edentulous mandibles



Results – 3 years

- The crestal bone level mean changes were identical in the experimental (ITT n=17, PP n=14) and control (ITT/PP n=19) groups:
 - 1.2 mm (1 yr) → 1.7 mm (2yrs) → 2.2 mm (3 yrs)
- There was no difference between the experimental and the control group re. frequency of biological and technical complications
- Same day loading of implants in the anterior mandible to retain a full arch FDP compared to waiting for four months before loading seems to yield comparable outcomes after 3 years observation.

Initiated 2008

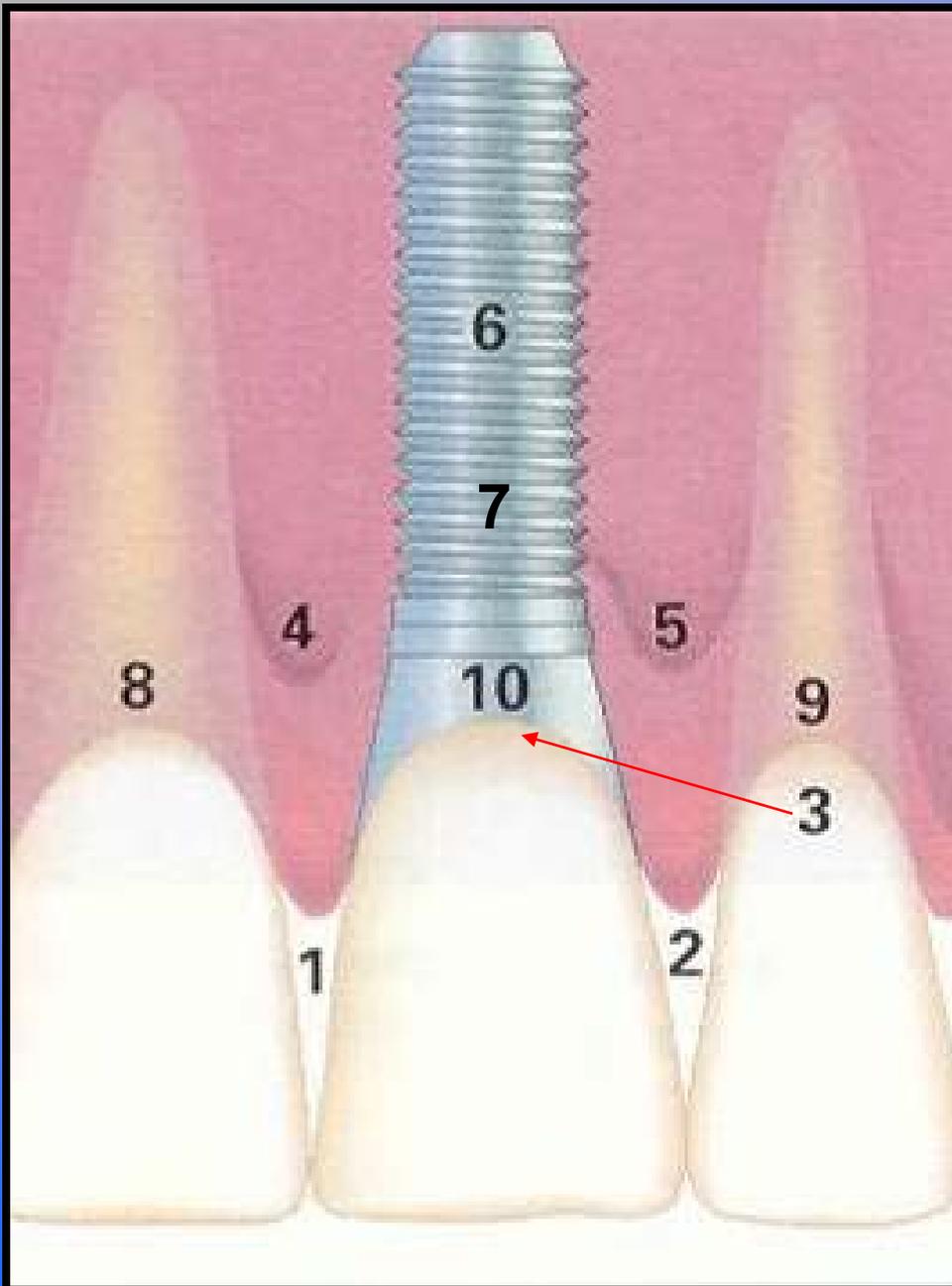


- Cross-sectional study (n=116)
- Patient treatment : 1991 to 2008
- *Interproximal Papillae Adjacent to Single Implant Crowns in the Aesthetic Zone: Clinical and Radiographic Findings from a Multi-Private Practice Based Research Network (PBRN) and Post-Graduate Prosthodontics/Periodontology*
- Student P.I. Dr Mark H Lin, MSc Thesis 2009
- Supervisor: Professor Asbjorn Jokstad
- Funded by Prosthodontics discipline funds

Interproximal Papillae Adjacent to Single Implant Crowns

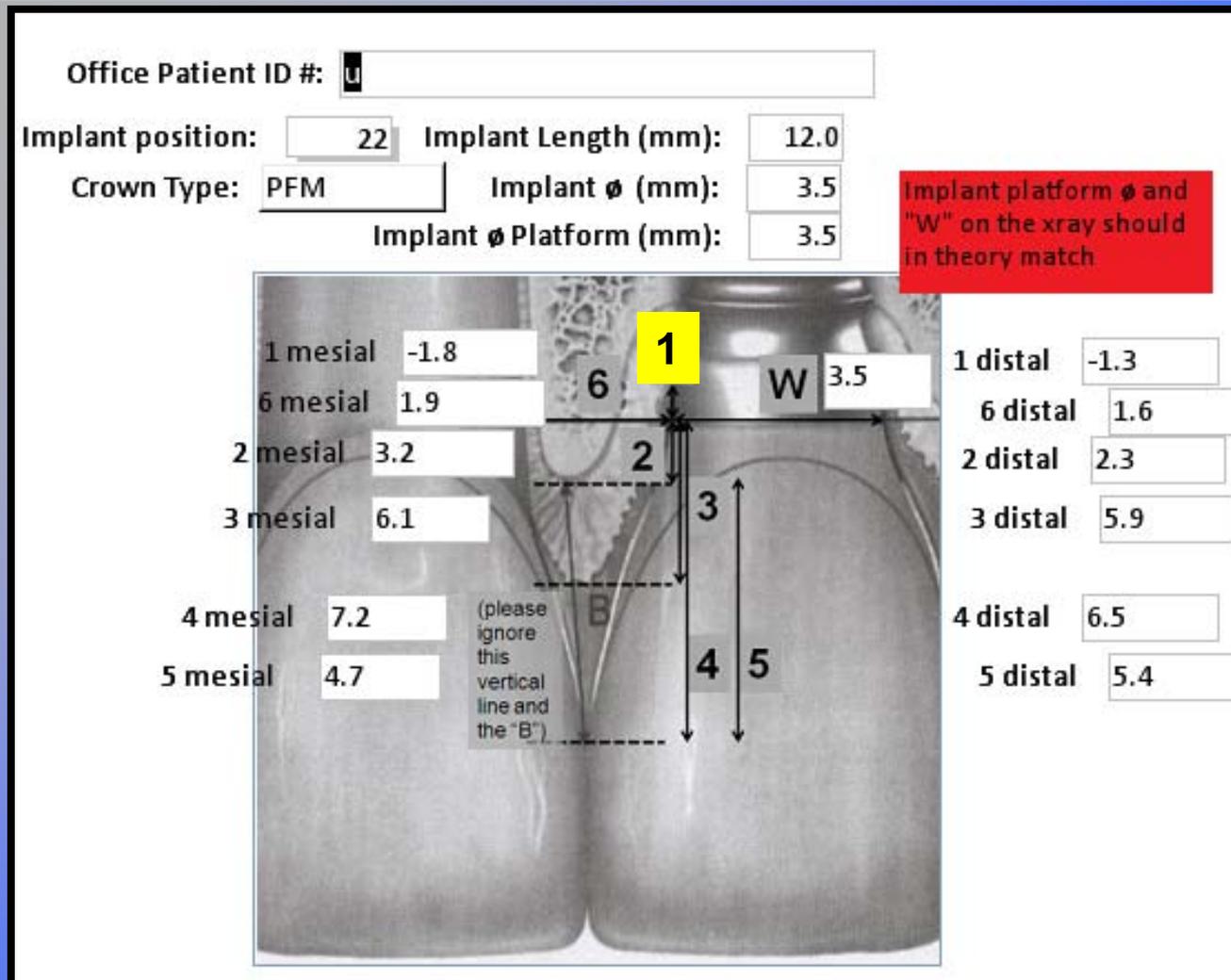
To conduct a retrospective, cross-sectional study within a Practice Based Research Network (PBRN) of private practitioners to assess the presence or absence of interproximal papillae adjacent to single implant crowns in the aesthetic zone.





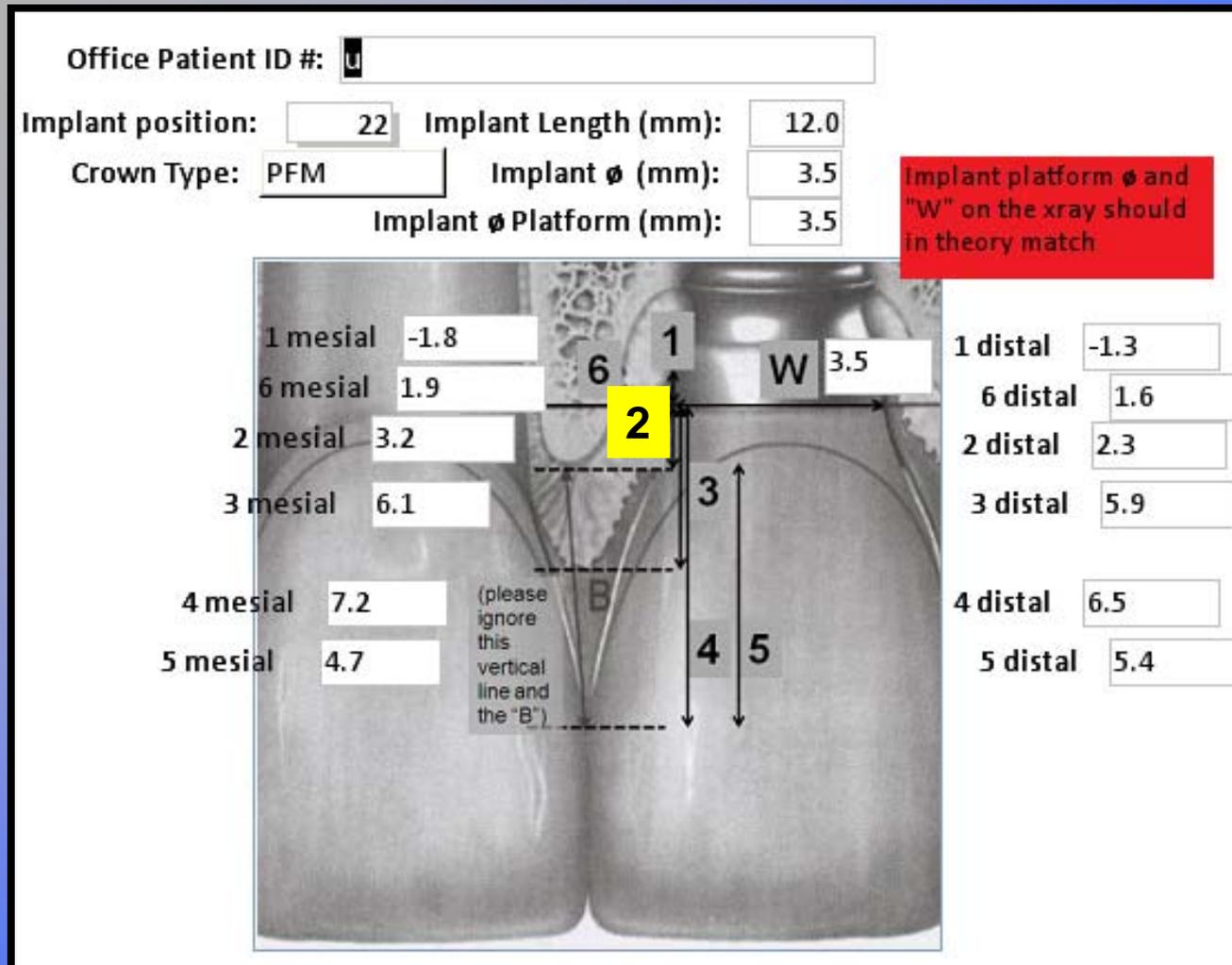
- 1) Mesial papilla
- 2) Distal papilla
- 3) Marginal gingiva
- 4) Mesial intercrestal bone
- 5) Distal intercrestal bone
- 6) Implant integration
- 7) Precise implant position
- 8) Adjacent marginal gingiva
- 9) Adjacent marginal gingiva
- 10) Emergence profile angle

Interproximal Papillae Adjacent to Single Implant Crowns



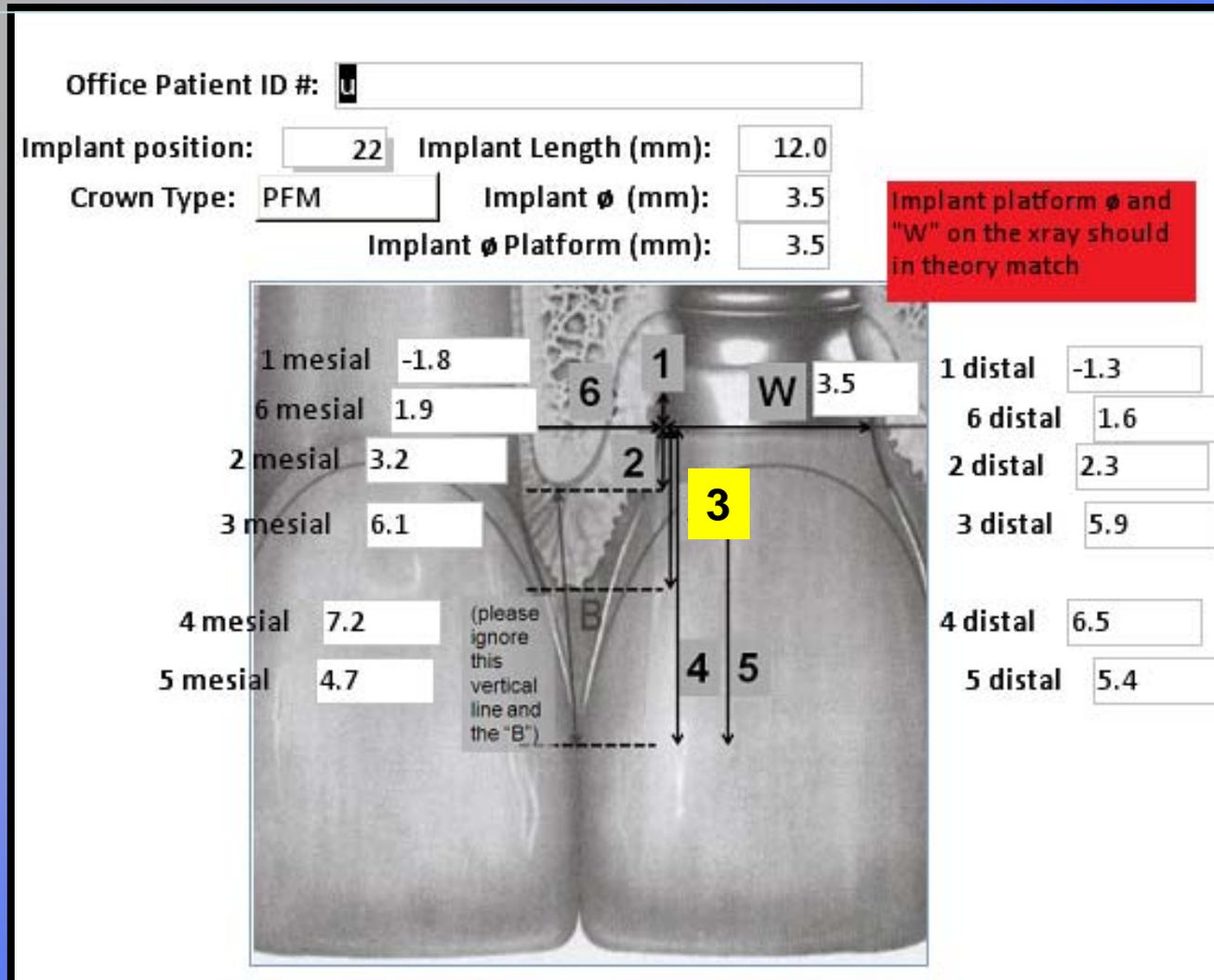
1) The vertical distance between the shoulder of the implant and the most coronal point of the bone level contacting the implant.

Interproximal Papillae Adjacent to Single Implant Crowns



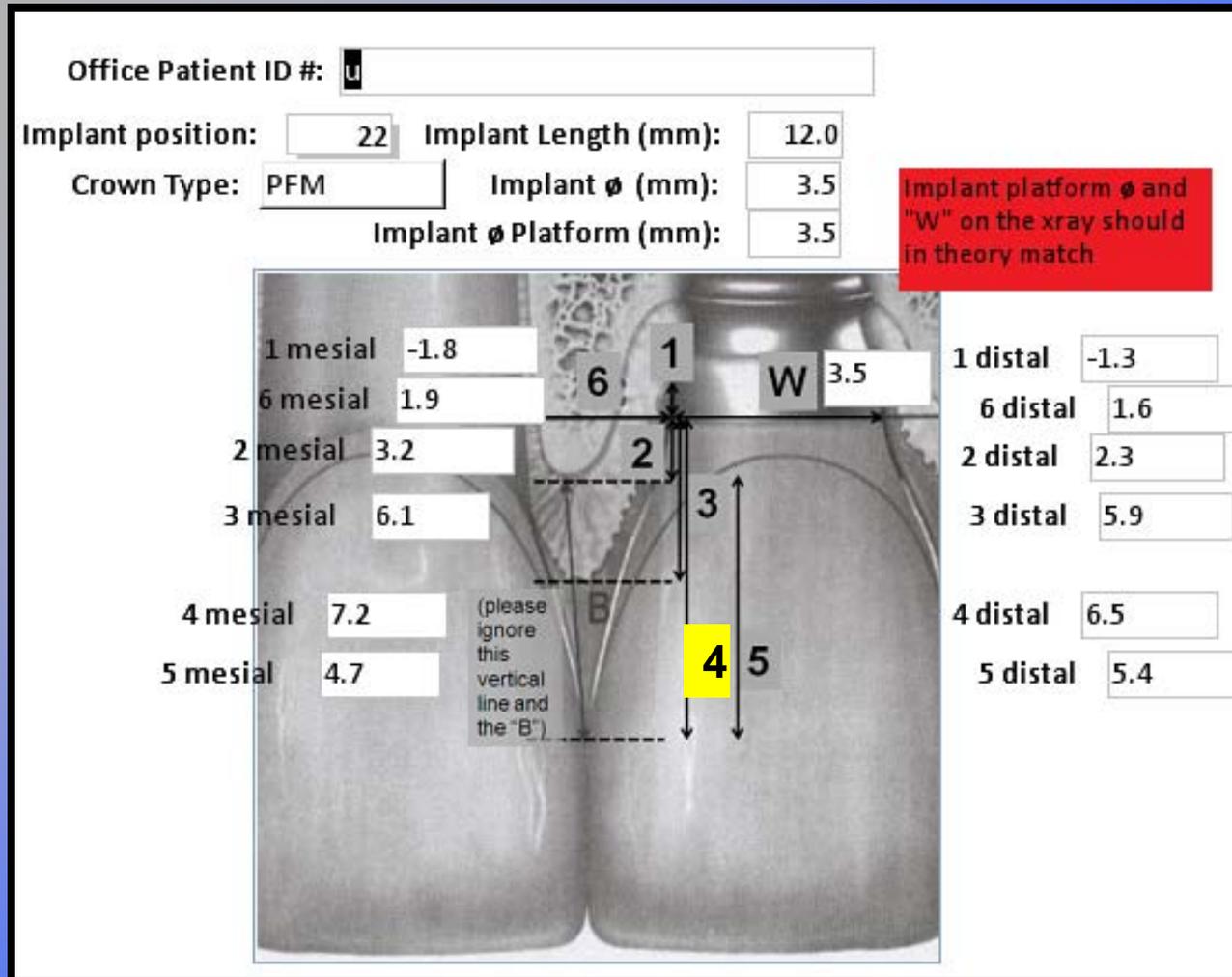
2) The vertical distance between the shoulder of the implant and the most coronal point of the bone level contacting the tooth.

Interproximal Papillae Adjacent to Single Implant Crowns



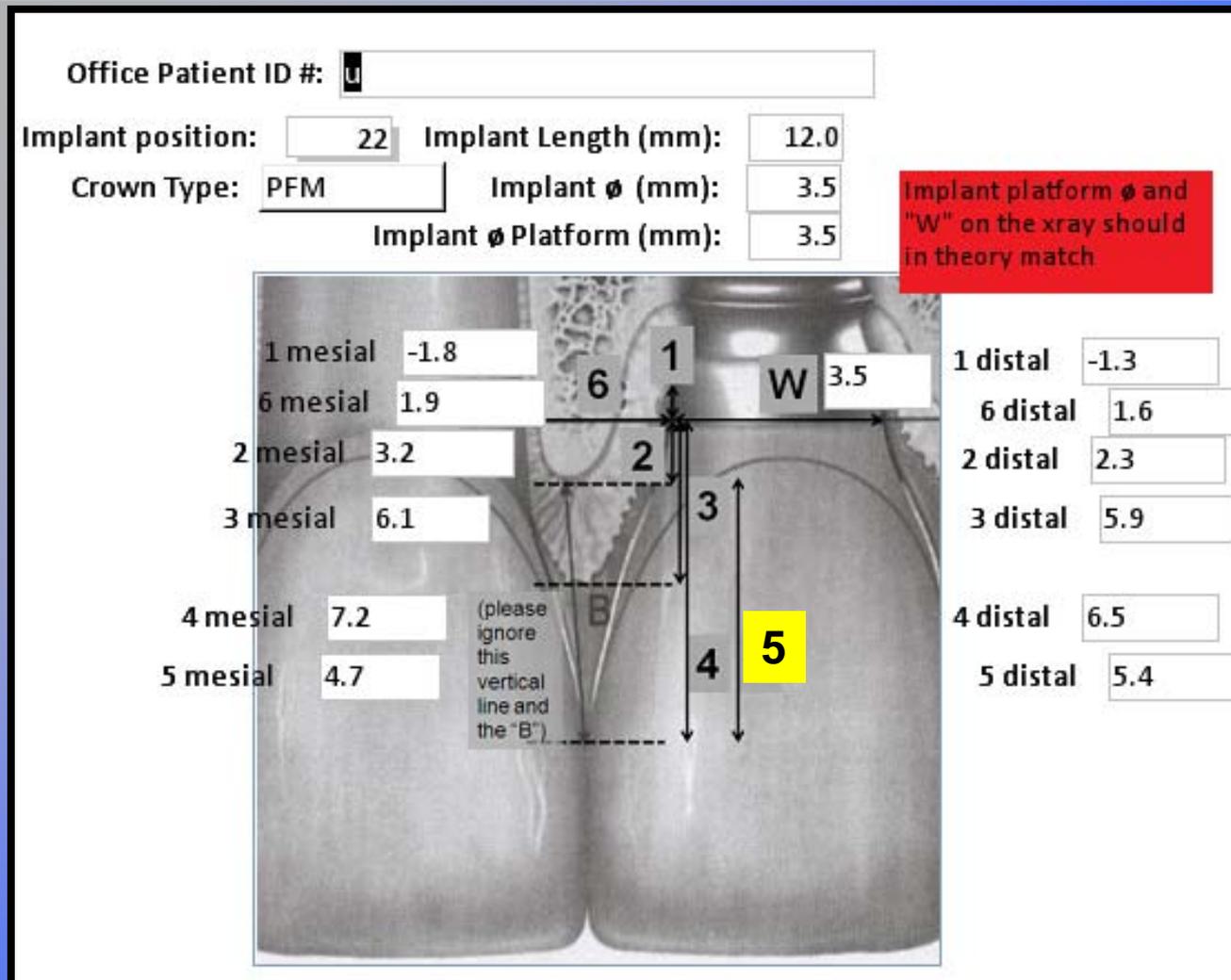
3) The vertical distance between the shoulder of the implant and the most coronal papilla level.

Interproximal Papillae Adjacent to Single Implant Crowns



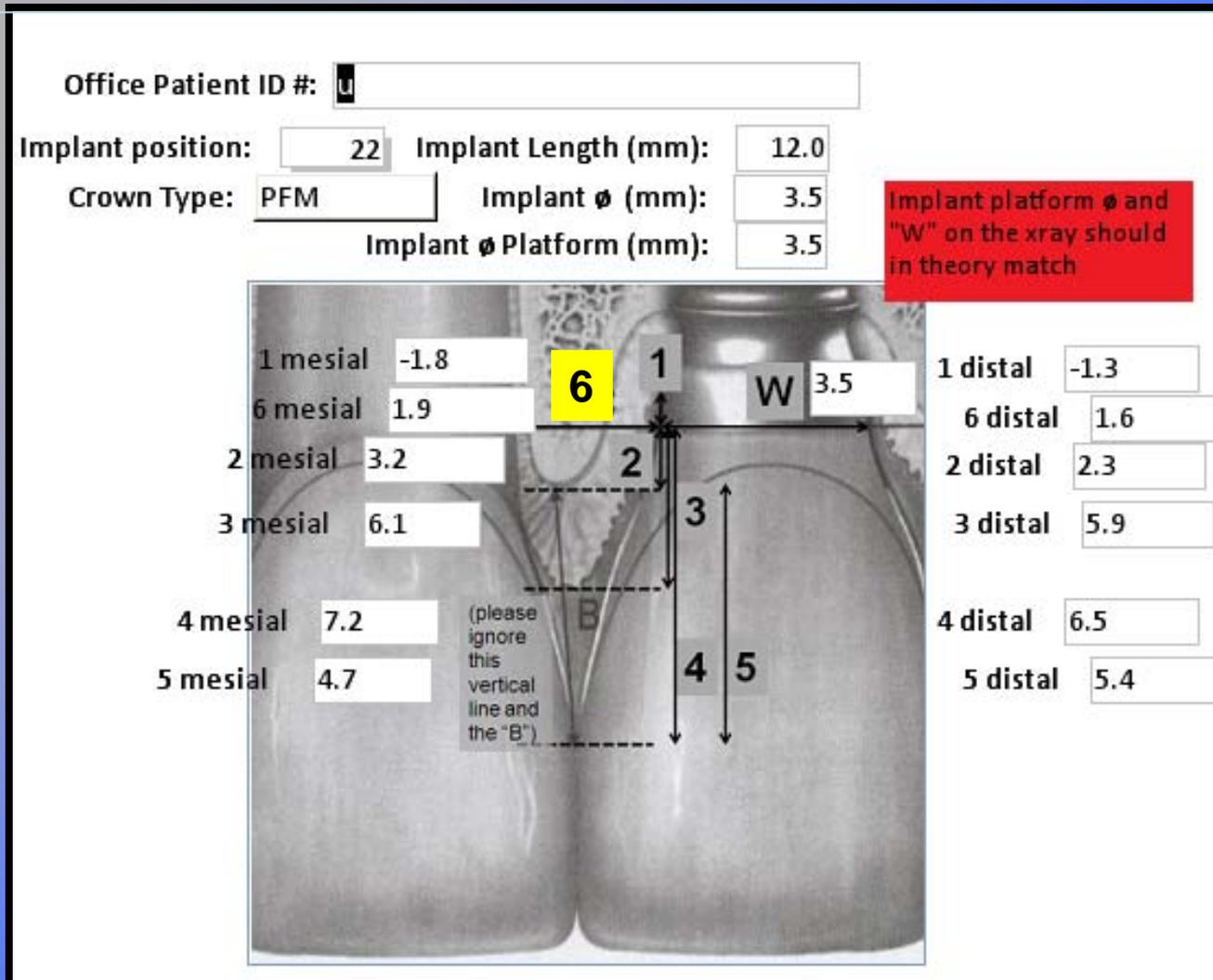
4) The vertical distance between the shoulder of the implant and the most apical level of the contact point between the crown and the teeth and the implant.

Interproximal Papillae Adjacent to Single Implant Crowns



5) The vertical distance between the crest of bone on the natural tooth and the contact point.

Interproximal Papillae Adjacent to Single Implant Crowns



6) The horizontal mesio-distal distance between the tooth and the implant at the implant shoulder.

Null Hypotheses:

The following null hypotheses were set:

- A) The presence of the inter-dental/inter-implant papilla does not correlate with the vertical measurement from the crest of the bone adjacent to the natural dentition to contact point;

- B) The presence of the inter-dental/inter-implant papilla does not correlate with the horizontal measurement from the platform of the implant to the adjacent tooth.

Interproximal Papillae Adjacent to Single Implant Crowns

- A cross-sectional study design was used where data were gathered from a Toronto-based Dental PBRN
- Data also gathered from Implant Prosthodontic Unit (IPU) and Oral Reconstruction Center (ORC) located at the Faculty of Dentistry, University of Toronto.

Interproximal Papillae Adjacent to Single Implant Crowns



IPUBC07A-1.JPG



IPUBC07A-2.JPG



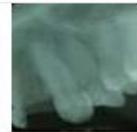
IPUBC07A-3.JPG



IPUBC07A-4.JPG



IPUBC07A-5.JPG



IPUBC07B-1.JPG



IPUBC07B-2.JPG



IPUBC07B-3.JPG



IPUBC07B-4.JPG



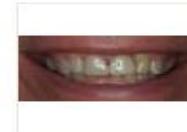
IPUBC07B-5.JPG



IPUBP28-1.JPG



IPUBP28-2.JPG



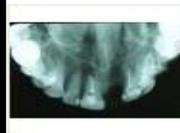
IPUBP28-3.JPG



IPUBP28-4.JPG



IPUBP28-5.JPG



IPUFT34-4.JPG



IPUFT34-1.JPG



IPUFT34-2.JPG



IPUFT34-3.JPG



IPUHC08-1.JPG



IPUHC08-2.JPG



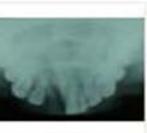
IPUHC08-3.JPG



IPUHC08-4.JPG



IPUHC08-5.JPG



IPUJB21-1.JPG



IPUJB21-2.JPG



IPUJB21-3.JPG



IPUJB21-4.JPG

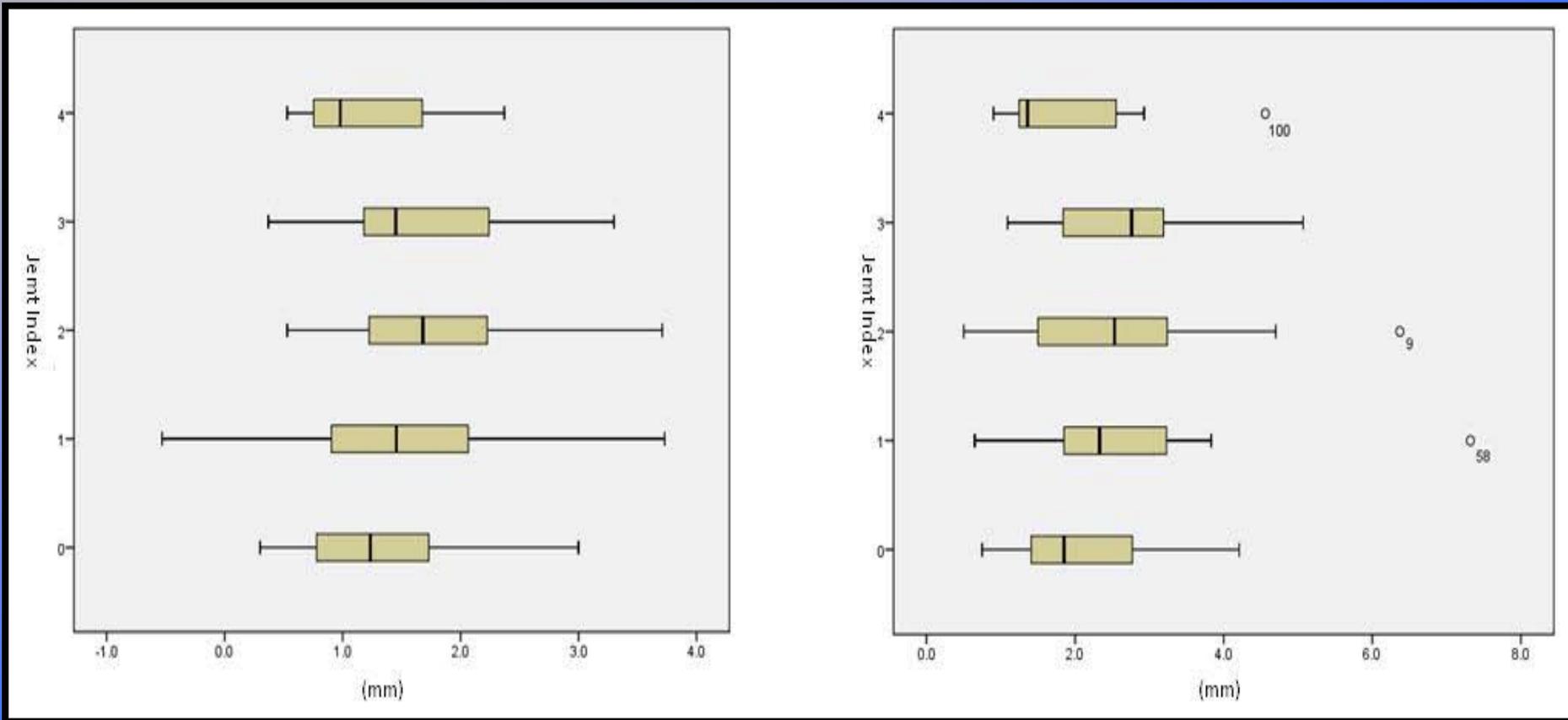


IPUJB21-5.JPG



Interproximal Papillae Adjacent to Single Implant Crowns

Horizontal distance between implant and adjacent tooth and Jemt Papillary Index: Mesial sites right, distal sites left



0=



1=



2=



3=



4=



Results

Our results indicate that we should accept our null hypotheses that:

- 1) The presence of the inter-dental/inter-implant papilla does not correlate with the vertical measurement from the crest of the bone adjacent to the natural dentition to contact point**
- 2) The presence of the inter-dental/inter-implant papilla does not correlate with the horizontal measurement from the platform of the implant to the adjacent tooth.**

Conclusions

- A) The degree of presence of the interdental/interimplant papilla occurs randomly irrespective of clinical parameters reported previous studies**

- B) Contrary to previously published data, our results show that when the vertical distance from the crest of the bone to the contact point on the natural tooth is <5.0 mm, and likewise, when the horizontal distance of implant platform to the adjacent tooth is >2.0 mm, these parameters will NOT be predictable indicators for the presence of the interproximal papillae.**

Initiated 2009

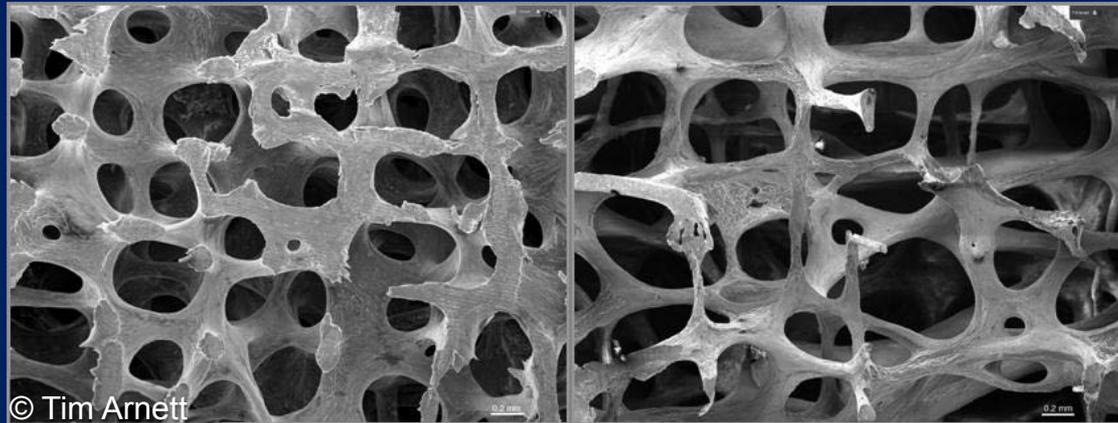


- Retrospective case-control study (n=24)
- Patient treatment : 1980 to 2009
- *Dental implant outcomes in patients with osteoporosis*
- Student P.I. Dr Sagun Suri, MSc Thesis 2009
- Supervisor: Professor Asbjorn Jokstad
- Funded by Prosthodontics discipline funds

Dental implant outcomes in patients with osteoporosis

Pathophysiology of osteoporosis

Normal bone
(30yr old F)



Osteoporotic bone
(71yr old F)

Imbalance between bone resorption and new bone formation

A small deficit of bone at the end of every bone remodelling cycle



Trabecular bone thins over time and eventually perforates



Gets disconnected from its surrounding tissue



Trabeculae weaken



Fracture

Aims

Primary Aim:

To study dental implant outcomes in 60+ years old patients with osteoporosis at the time of implant placement, compared with outcomes in a matched control group

Null Hypothesis:

There is no difference in dental implant outcomes in 60+ years old patients with osteoporosis at the time of implant placement compared to those without osteoporosis at the time of implant placement

Identification and verification of study sample:

Dental Implant Tracker used to identify patients 60+ years with implants placed in graduate Prosthodontic clinic, Faculty of Dentistry

532



Active clinical charts identified to record medical history details from them and Axium

228



Patients with osteoporosis identified and invited

39



Accepted invitation to participate

24

Final study sample (with osteoporosis) N=24 (20F; 4M)

Control sample

Matched control (without osteoporosis)

Matched for

age

sex

similarity of implant procedure

number

location

extent of surgical procedure

type of suprastructure

status of opposing arch

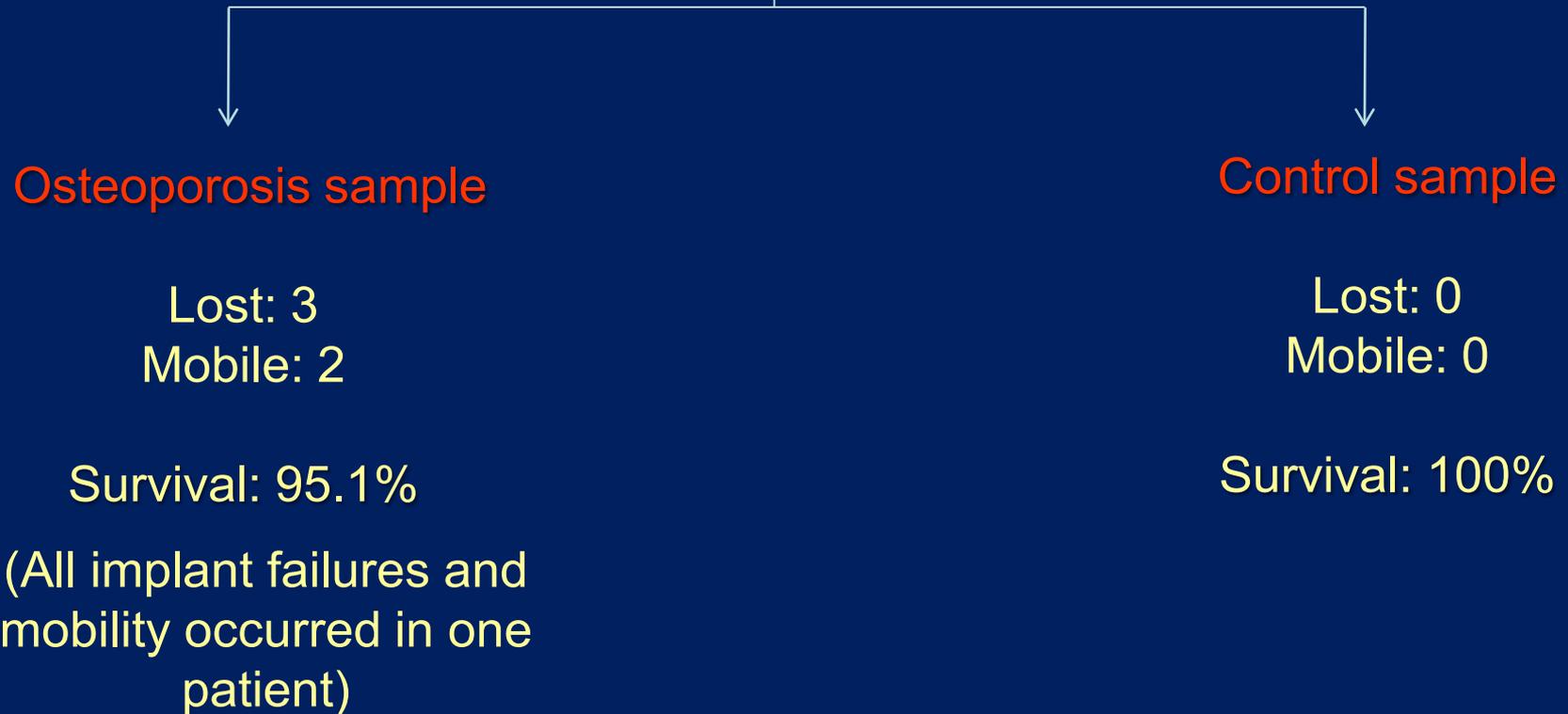
as closely as possible

Final control sample (without osteoporosis) N=24 (20F; 4M)

Invited for follow-up evaluation

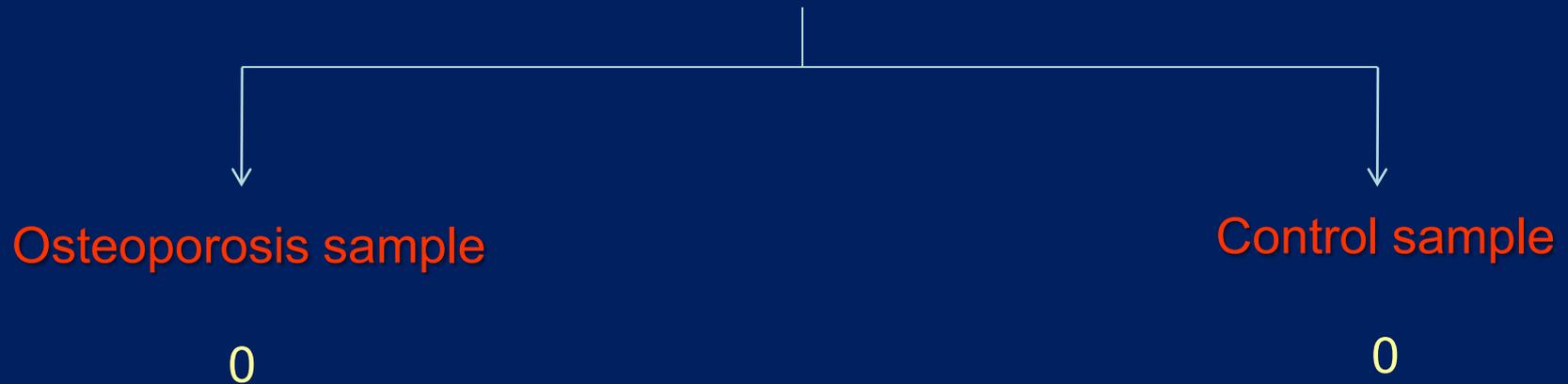
Follow-up examination

Implant loss and mobility



Follow-up examination

Pain, infection around the implant, neuropathy, paraesthesia, peri-implant radiolucency,



Follow-up examination

Bone loss (mean of mesial and distal sides) from baseline to follow-up measured on periapical radiographs

Osteoporosis sample

$0.35 \pm 0.93\text{mm}$

Not statistically significant ($p=0.92$)

Control sample

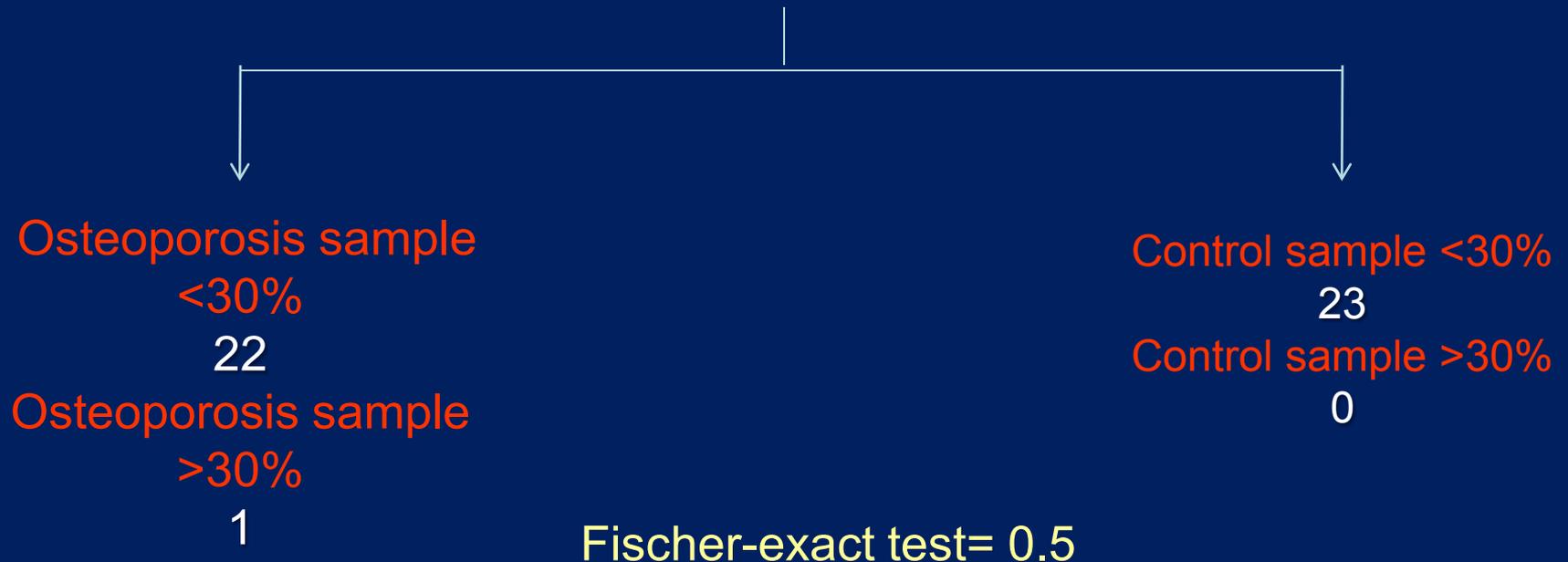
$0.32 \pm 0.63\text{mm}$



From paired t -test comparisons of 16 case-control patient pairs

Follow-up examination

< or > 30% bone loss from baseline to follow-up



From Fischer-exact test comparisons of 23 case-control patient pairs

Follow-up examination



Clinical implications of findings

- Dental implants in patients with osteoporosis when the medical control of the disease is adequate, can be placed with the expectation that the outcomes are not likely to be different from those who do not have the disease
- It needs to be kept in mind that the sample was modest in this study

Conclusions

‘There is no difference in dental implant outcomes in patients having osteoporosis at the time of implant placement compared to those not having osteoporosis at the time of implant placement’

The null hypothesis was accepted

Initiated 2010



- Cross-sectional study
- Patient treatment : 1991 to 2008
- *Single Implant Supported Crowns in the Aesthetic Zone. Patient Satisfaction with own Treatment Compared to Evaluations of Aesthetic Appearance by Laypersons and Dentists.*
- Student P.I. Dr Joseph Fava, MSc Thesis 2011
- Supervisor: Professor Asbjorn Jokstad
- Funded by Prosthodontics discipline funds

Implant Crowns in the Aesthetic Zone and Patient Satisfaction

Single Implant Supported Restorations in the Aesthetic Zone. Patient Satisfaction with own Treatment Compared to Evaluations of Aesthetic Appearance by laypersons and dentists.

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

J Fava*, M Lin, M Zahran, A Jokstad

Faculty of Dentistry, University of Toronto, Toronto, Ont. Canada M5G 1G6

Abstract

BACKGROUND: The treatment of anterior open tooth spaces with single implants is often challenging since the patient expectations for their rest is high. **OBJECTIVE:** The aim of this survey is to appraise to what extent patient satisfaction and awareness of aesthetic appearance using an implant treatment in the aesthetic zone compare with dentists' and laypeople's perceptions. **MATERIALS AND METHODS:** The project was approved by UofT REB in 2008 (#12187). Patients were recruited from a dental practice-based research network in Toronto. Patients that had an implant-retained crown in the anterior maxilla (15-45) at least 6 months earlier were invited to respond on a 5-level Likert scale regarding their satisfaction with aspects of their crown. Projected images of the crowns were appraised by dentists (n=5) and laypeople in 8 room settings. The laypeople judged also printed 10x15cm photographs. All scores were compared to determine if there was a difference in the level of satisfaction between the actual patient, dentist, and laypeople. The pink and white esthetic scores (PES/WES) and Jemt papilla index scores were assigned. Parametric and non-parametric statistics when appropriate were used to compare observed data. **RESULTS:** Data was collected from 130 patients. 72 patients considered their overall aesthetic outcome as "Excellent" (55%), 45 patients scored "Very good" (35%), 10 "Good", while 2 reported "Fair". Laypeople were less critical than the dentists when judging from printed photographs and more critical when same images were projected on a screen. When the patients judged their overall aesthetic appearance as "good" or "fair", both dentists and laypeople gave higher average scores for about 50% of the cases. **CONCLUSION:** Patient satisfaction and awareness of aesthetic appearance following an implant treatment in the aesthetic zone differ from dentists' and laypeople's observations. Laypeople's evaluation is influenced by the method used for appraising the outcome.

Introduction

Replacing a single tooth edentulous space in the aesthetic zone with a dental implant has become a mainstream treatment modality that enjoys a documented high level of osseointegration as well as long-term functional success. Patients today compare restorative efforts using the contralateral natural tooth as the gold standard. To meet our perceived patient's goals, we should strive to achieve an "ideal" aesthetic result. Emphasis must be placed on the subtle interplay between the implant and adjacent tooth position in both the buccal-lingual, mesial-distal and apico-coronal dimension. The soft tissue drape, as well as obtaining ideal papillar form, is also considered crucial for aesthetics. Much has been written on this topic, and the parameters for aesthetic success have been elucidated. The relationship between aesthetics and patient satisfaction remains unknown. Moreover, how does the dental profession's perception of single tooth implant supported restoration compare to that of the patient's? Is the dental profession more easily satisfied than our patients, or are we more critical?

Hypothesis

There is no difference in the level of satisfaction of a single tooth implant restoration in the aesthetic zone between the patient, laypeople and dentists.

Methodology

130 patients were invited to participate in a Practice Based Research Network (PBRN) comprised of private practice, Implant Prosthodontic Unit (IPU), and Oral Reconstruction Clinic (ORC) at the University of Toronto, Faculty of Dentistry, providing a diverse patient sample that is representative of the population.

Each patient responded to a questionnaire to ascertain the level of satisfaction with their own restorative result.

8 Dentists (screen) and 8 laypeople (screen and photos) were asked to respond to the same questionnaire.

PES/WES scores were assigned to each result to determine if it were possible to quantify an aesthetic result.

Wilcoxon rank statistical analysis was performed to determine level of agreement between groups.



Patient Overall "excellent", sorted by overall aesthetic appearance by dentists



Patient Overall "very good", sorted by overall aesthetic appearance by dentists



Patient Overall "good", sorted by overall aesthetic appearance by dentists

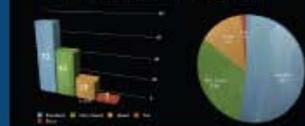


Patient Overall "fair", sorted by overall aesthetic appearance by dentists

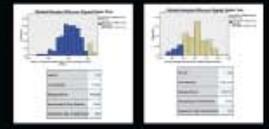
Results

- Data was collected for 130 patients. 72 patients considered their overall aesthetic outcome as "Excellent" (55%), 45 patients scored "Very good" (35%), 10 "Good", while 2 reported "Fair".
- Laypeople were less critical than the dentists when judging from printed photographs and more critical when same images were projected on a screen.
- When the patients judged their overall aesthetic appearance as "good" or "fair", both dentists and laypeople gave higher average scores for about 50% of the cases.
- PES/WES appears to have a linear relationship to dentist overall aesthetic appearance scores.

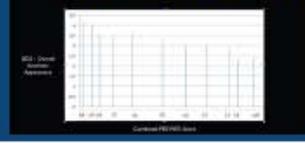
OVERALL AESTHETIC APPEARANCE ACCORDING TO PATIENT



N=139 VS. AVERAGE SCORES



PES/WES VS. AVERAGE DENTIST OVERALL SCORES



CORRELATIONS BETWEEN THE THREE APPRAISAL GROUPS



Conclusion

- The level of satisfaction of an implant restoration in the aesthetic zone differs between laypeople, dentists and from that of the patient.
- Laypeople's evaluation is influenced by the method used for appraising the aesthetic outcomes. Laypeople seemed to be more critical of the aesthetic result when the images were projected on a screen as compared to printed on 10x15cm photographic paper.

References

1. J. Fava, M. Lin, M. Zahran, A. Jokstad. Satisfaction with single implant restorations in the aesthetic zone: a survey of the overall outcome. *Int J Oral Maxillofac Surg* 2011; 40: 1042-1047.

2. J. Fava, M. Lin, M. Zahran, A. Jokstad. Patient satisfaction with single implant restorations in the aesthetic zone: a survey of the overall outcome. *Int J Oral Maxillofac Surg* 2011; 40: 1042-1047.

3. J. Fava, M. Lin, M. Zahran, A. Jokstad. Patient satisfaction with single implant restorations in the aesthetic zone: a survey of the overall outcome. *Int J Oral Maxillofac Surg* 2011; 40: 1042-1047.

4. J. Fava, M. Lin, M. Zahran, A. Jokstad. Patient satisfaction with single implant restorations in the aesthetic zone: a survey of the overall outcome. *Int J Oral Maxillofac Surg* 2011; 40: 1042-1047.

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Hypothesis

There is no difference in the level of satisfaction of a single tooth implant restoration in the aesthetic zone between the patient, laypeople and dentists.

Methodology 1/3

139 patients were invited to participate in a Practice Based Research Network (PBRN) comprised of private practice, Implant Prosthodontic Unit (IPU), and Oral Reconstruction Clinic (ORC) at the University of Toronto, Faculty of Dentistry, providing a diverse patient sample that is representative of the population.

Each patient responded to a questionnaire to ascertain the level of satisfaction with their own restorative result.

Methodology 2/3

8 Dentists (screen) and 6 laypeople (screen and photos) were asked to respond to the same questionnaire.



BGCC03 - TOOTH 2.1

	Excellent (E)	Very Good (VG)	Good (G)	Fair (F)	Poor (P)
1. Overall Aesthetic Appearance					
2. Colour match					
3. Tooth Shape					
4. Tooth Size					
5. Gum Colour					
6. Gum Contour					
7. Gum fill tissue between implant adjacent teeth					

Methodology 3/3

8 Dentists (screen) and 6 laypeople (screen and photos) were asked to respond to the same questionnaire.

PES/WES scores were assigned to each result to determine if it were possible to quantify an aesthetic result.



BGCC03-5
TOOTH 1.1



PES		WES	
1. Shape/Form	0 1 2	1. Tooth Form	0 1 2
2. Color/Patch	0 1 2	2. Outline/Volume	0 1 2
3. Extension of Facial Margin	0 1 2	3. Colour (hue/value)	0 1 2
4. Level against Maxilla	0 1 2	4. Surface Texture	0 1 2
5. Root Extension/Retraction Colour and Texture	0 1 2	5. Translucency/Characterization	0 1 2
Maximum Score = 10		Maximum Score = 10	

Implant Crowns in the Aesthetic Zone and Patient Satisfaction

Patient Overall "excellent", sorted by overall aesthetic appearance by dentists



Implant Crowns in the Aesthetic Zone and Patient Satisfaction

Patient Overall "very good", sorted by overall aesthetic appearance by dentists

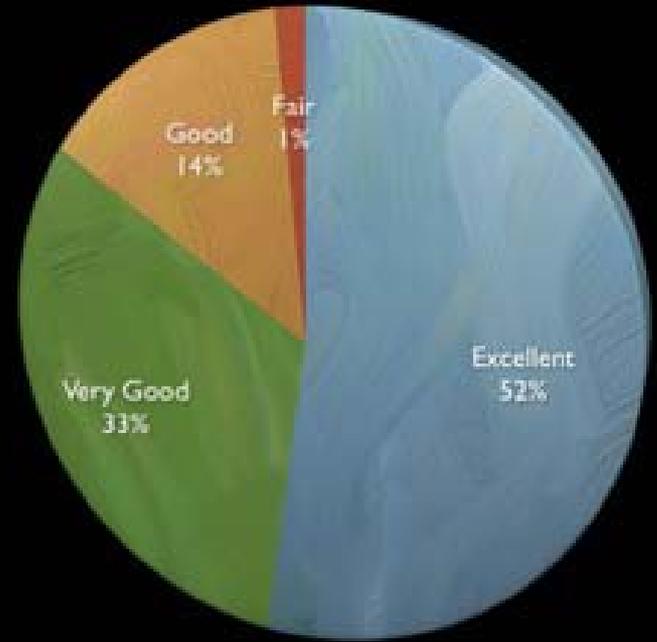
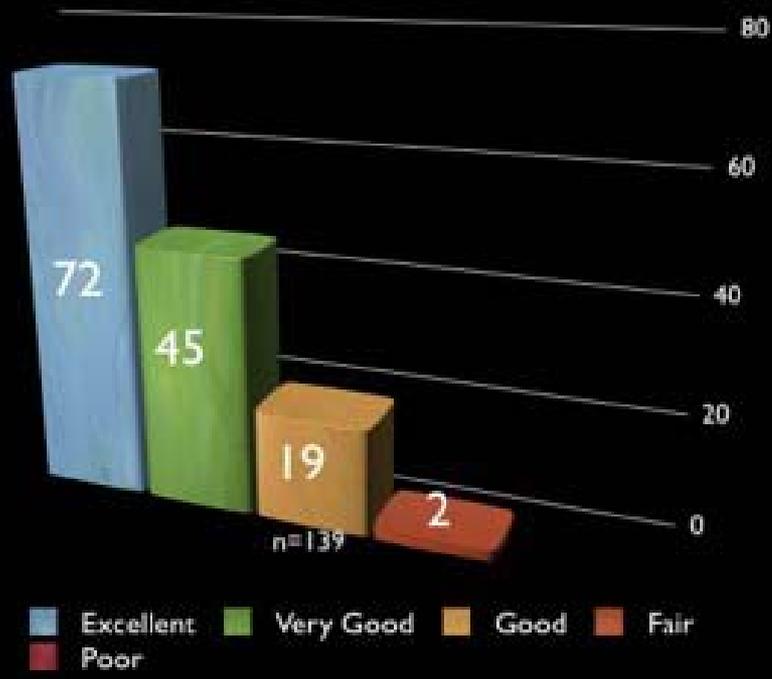


Implant Crowns in the Aesthetic Zone and Patient Satisfaction

Patient Overall “good”, sorted by overall aesthetic appearance by dentists

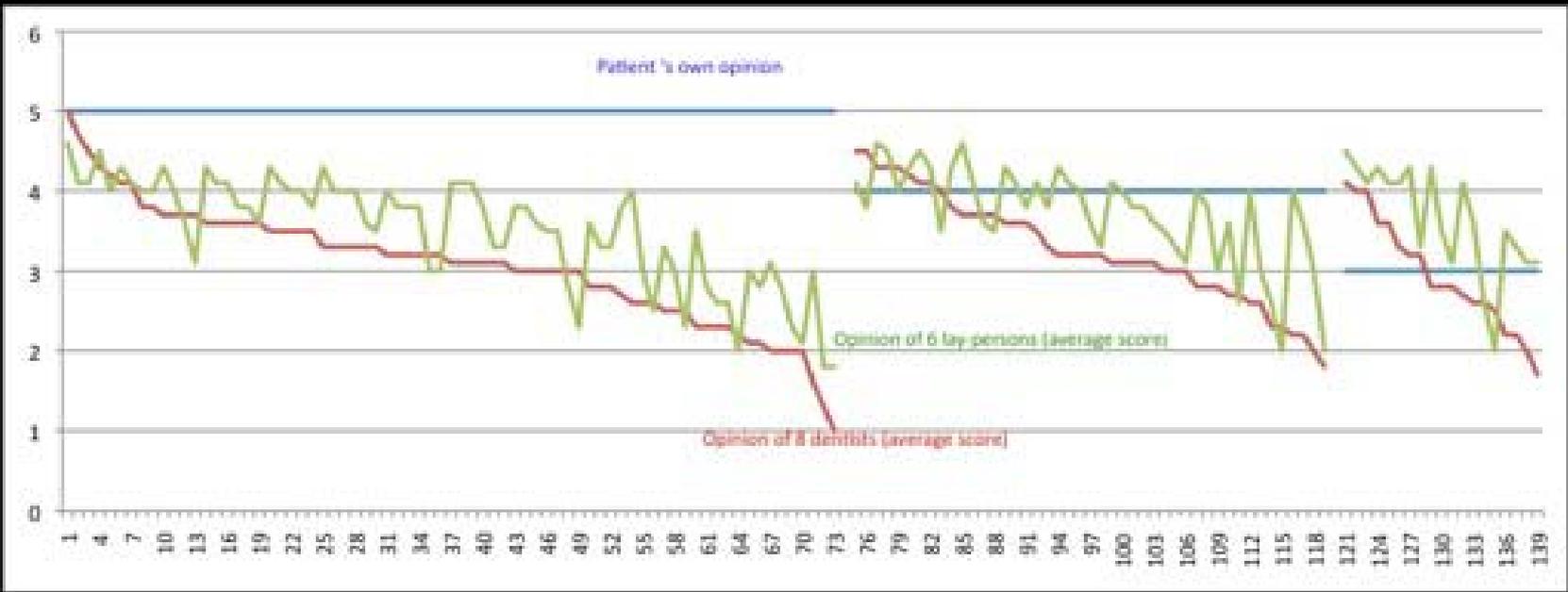


OVERALL AESTHETIC APPEARANCE ACCORDING TO PATIENT



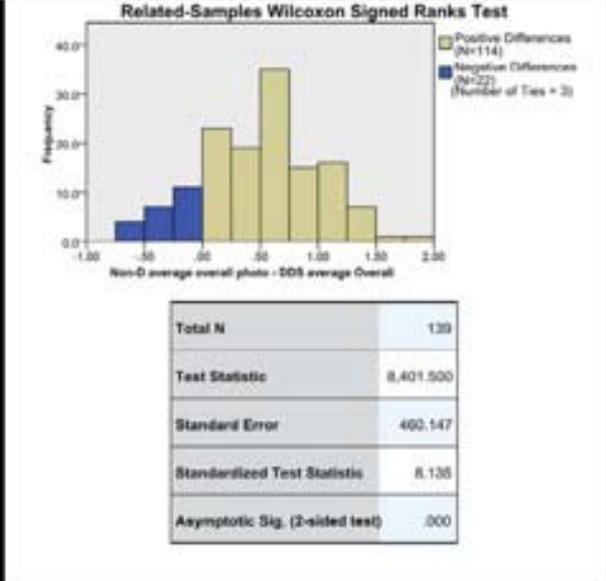
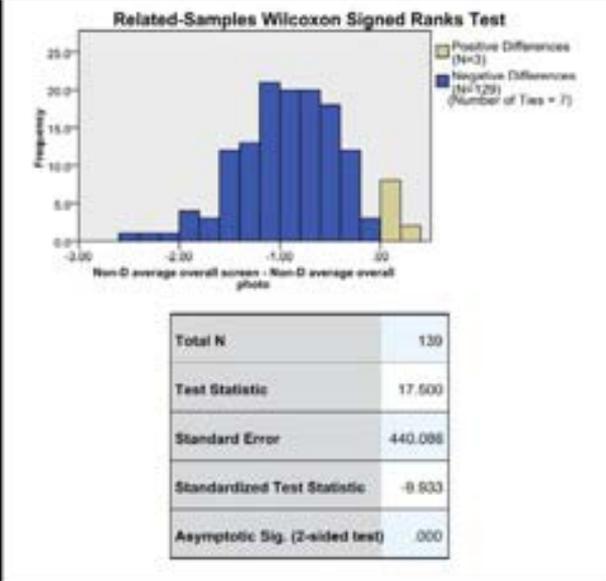
Implant Crowns in the Aesthetic Zone and Patient Satisfaction

N=139 vs. AVERAGE SCORES

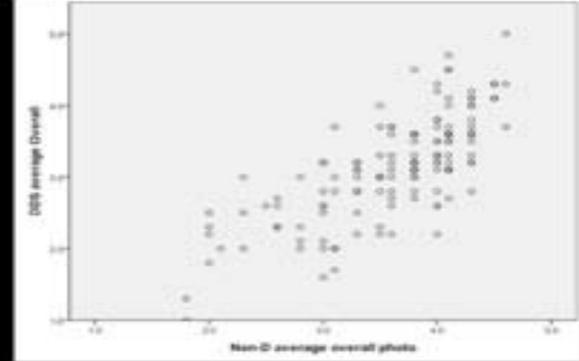
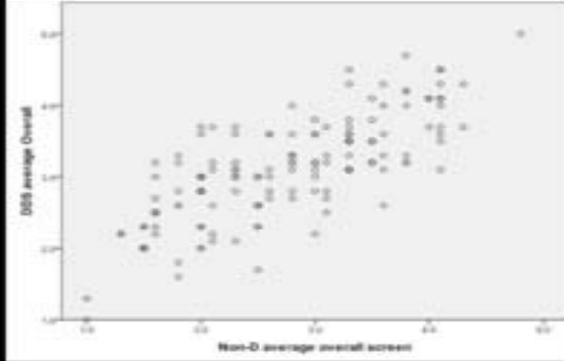
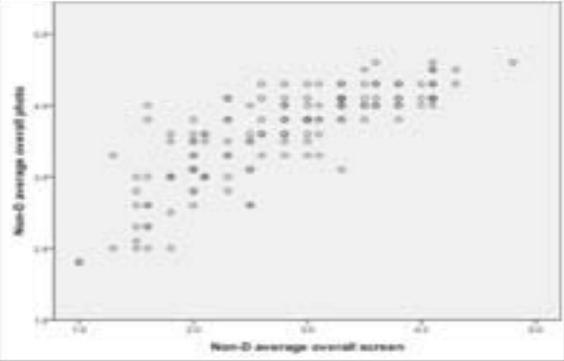


SORTED FIRST BY PATIENTS' SATISFACTION, NEXT BY THE DENTISTS AVERAGE SCORE AND NEXT BY LAY-PERSONS AVERAGE SCORE

Implant Crowns in the Aesthetic Zone and Patient Satisfaction



CORRELATIONS BETWEEN THE THREE APPRAISAL GROUPS



Results

- Laypeople were less critical than the dentists when judging from printed photographs and more critical when same images were projected on a screen.
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Thank you
for your
kind
attention



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