Esthetic design

Landscaping your yard versus Designing a new smile

Landscaper

Needs to know what the client wants

Needs to evaluate the property

Needs to create a blueprint for approval

Needs to show examples of work

Needs to work with subcontractors

Needs to know what is needed

Dentist

Needs to know what the pt. needs and wants

Needs to do a complete examination

Needs to create an approved design/blueprint

Needs to show examples of work

Needs to work with specialists

Needs to know what is needed, e.g. materials

Esthetic design

Purchasing a new car

versus

Purchasing a new smile

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Comprehensive esthetic dentistry - a value proposition

What you need

versus

JR

Comprehensive esthetic dentistry - a value proposition

What you want!

JR

Comprehensive esthetic dentistry - a value proposition

Generic

Lower expectations
Less detail oriented
Basic training
Volume/insurance driven?
Questionable team relationship
Generic design

versus

JR

Comprehensive esthetic dentistry - a value proposition

Higher expectations
More attention to detail
More artistic
Advanced training, e.g. AAACD
Close team relationship
Custom design

Custom

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Restorative options

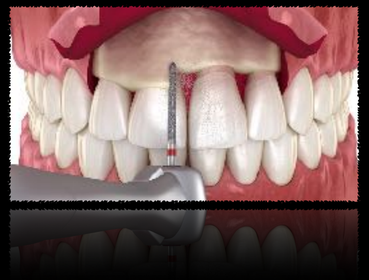
Direct restorations, e.g. composites, glass ionomers

Indirect, e.g. inlays, onlays, veneers, crowns

Removable, e.g. PRD's, FRD's

Orthodontics, e.g. Invisalign

Periodontics, e.g. crown lengthening



Tooth replacement, e.g. FPD's, Maryland bridges, implant supported

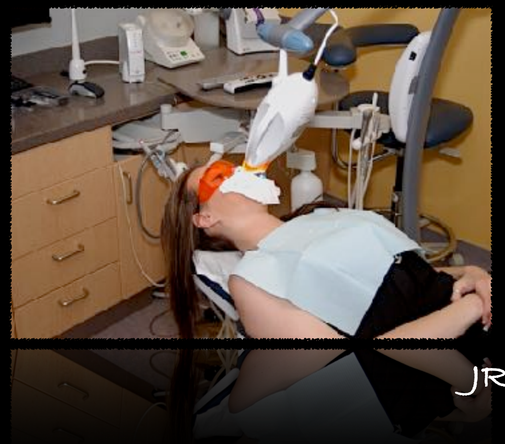
Tooth color modification options

Tooth pastes, e.g. Colgate Whitening

Micro-abrasion, e.g. pumice and hydrochloric acid

Restorative treatment options, e.g. veneers

Bleaching, e.g. ZOOM, trays, emulsions



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"Whitening" vs. "Bleaching"

Surface vs. intrinsic stains?

What does the patient expect?

What are they prepared to do?

History & mechanism of office vital tooth bleaching

Early as 19th century using hydrochloric acid treating primarily surface stains

Early 1900's used stabilized peroxide in water (30% superoxol)

In 1970 30% superoxol and rheostatically controlled heat

In 1987 used 35% H2O2, 37% phosphoric acid and heat to facilliate absorption

In 1988 used 35% hydrogen peroxide and silica gel w/o heat

In 2001 35% carbamide peroxide and UV light, ZOOM!

History & mechanism of home vital tooth bleaching

In late 1960's accidental discovery using carbamide peroxide

In 1989 first article published about nightguard bleaching

10% carbamide peroxide yields 3% H2O2 which yields oxygen, water and urea

Max effectiveness in 1-2 hour increments

Desensitizing agents added, e.g. potassium fluoride

Techniques developed combining office with home

Ultimate goal is to get O2 absorbed deep into the tooth

In 2021 emulsion therapy, Crest

Delivery options for vital tooth bleaching

OTC - "over the counter": White Strips - Crest

HTB - "home tray bleaching": Day Nite - Philips
Opalesence - Ultradent

OTB - "office tooth bleaching": Zoom - Philips

Home - Whitening emulsions: Crest

Phasing therapy

Spread out payments

More expensive to the patient

Patient will be in prototherapy longer

Less work per appointment

Not phasing therapy

Full payment received sooner

Less expensive to the dentist and patient

Therapy completed much sooner

Appointments significantly longer

Both approaches require comprehensive planning!

Treatment planning techniques and technology summary

- Communication considerations
- Photography
- Computer simulations
- Template designs
- Treatment options!
- Mock-ups
- Prototype restorations

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Pearl #4 to remember!

Success for ALL comprehensive restorative cases are based on ESTHETICS!

JR

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Interdisciplinary communication

Dentist

ialist

Patient!

Labo

facturer

Success in comprehensive cases rely on an efficient and thorough relationship with the other disciplines, i.e. lab, surgeon, etc.

Keeping up with latest trends and technology lends itself to more predictable outcomes, plus setting your practice ahead of most!

The inter-disciplinary dental team ultimately utilizes their skill and experience, along with the patient's desires, in order to create a successful functioning and esthetically pleasing outcome

No single esthetic element can be attributed with successfully attaining the final shape, size and position of the maxillary teeth

Chiche, GJ and Pinault AE. *Fundamental of esthetics of anterior fixed prosthodontics.* Quintessence Pub Co.Inc., 1994; **3**: 59.

Rufenacht CR. *Fundamental of esthetics* Quintessence Publishing Co. Inc., Chicago, Il, 1990; **4**: 114

Marquardt S. Esthetic facial analysis. 30th Annual USC Periodontal and Implant Symposium, Los Angeles, California, January 21-23, 2005.

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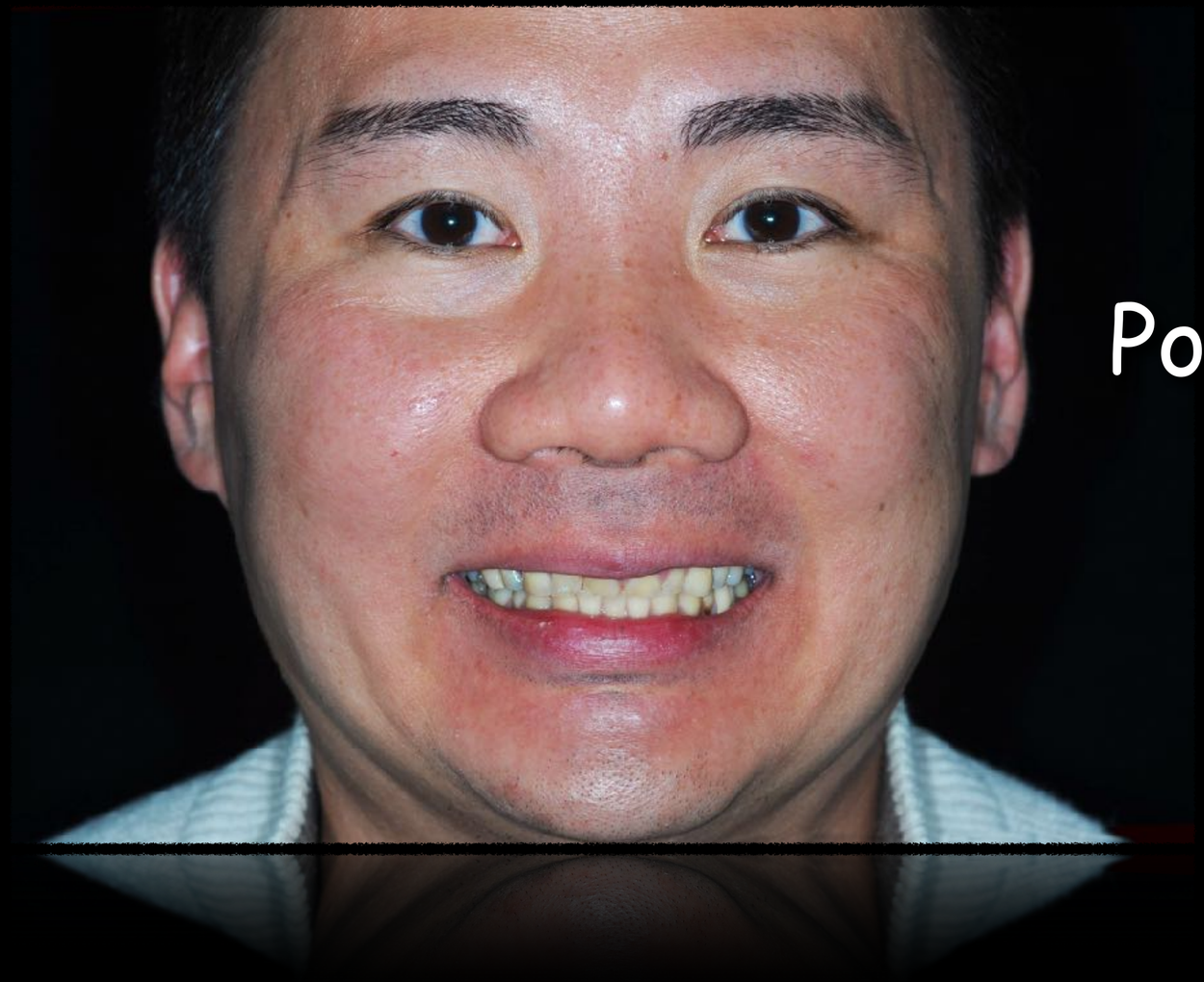
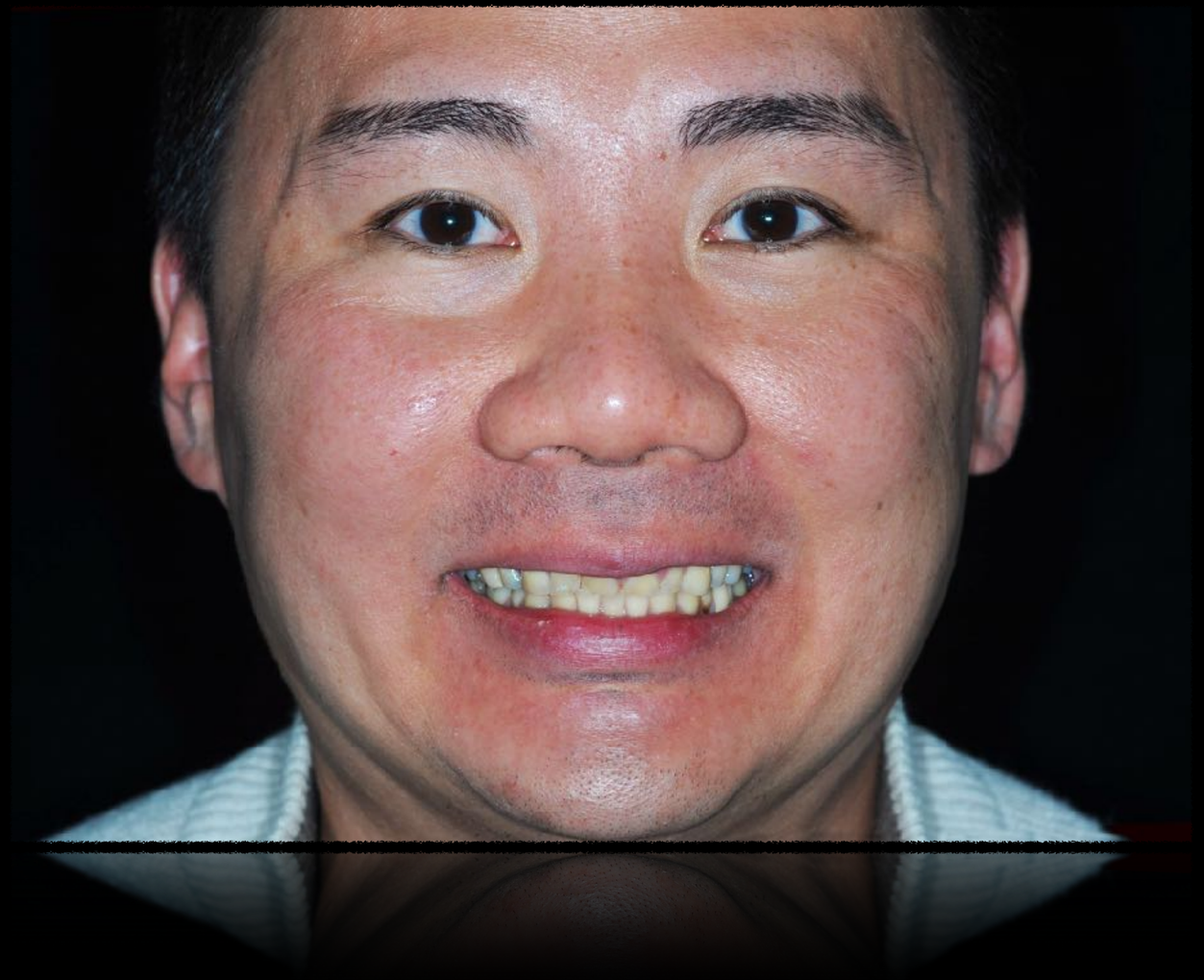
Case example 1



Poor esthetics due to short and discolored teeth

Case example 1



Team employed

Periodontist
Orthodontist
Laboratory technician
Manufacturer
Patient
Staff

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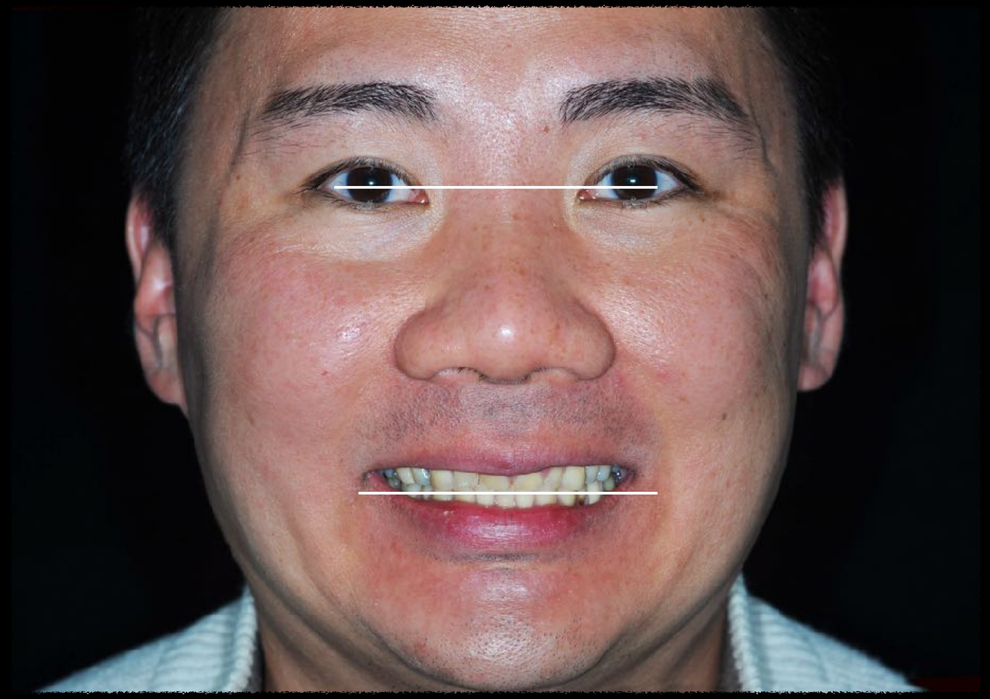
Case example 1

Wear and super eruption

Case example 1



Horizontal plane and desired incisal edge position

Pre-op measurements of centrals

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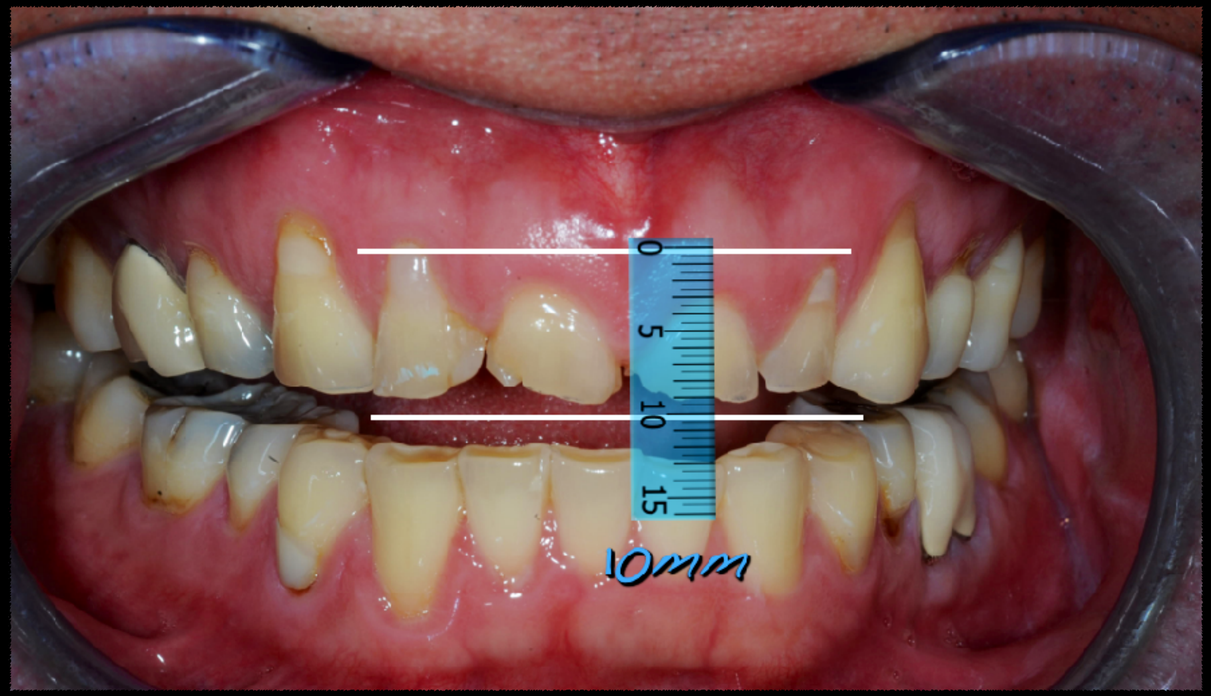
Case example 1

Proposed incisal plane



Proposed length of centrals

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Case example 1

Proposed template design

Proposed incisal plane

Proposed template design/incisal length

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Utilizing a soft tissue diode laser

Testing tissue levels

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Case example 1

Prototype based off of the wax up

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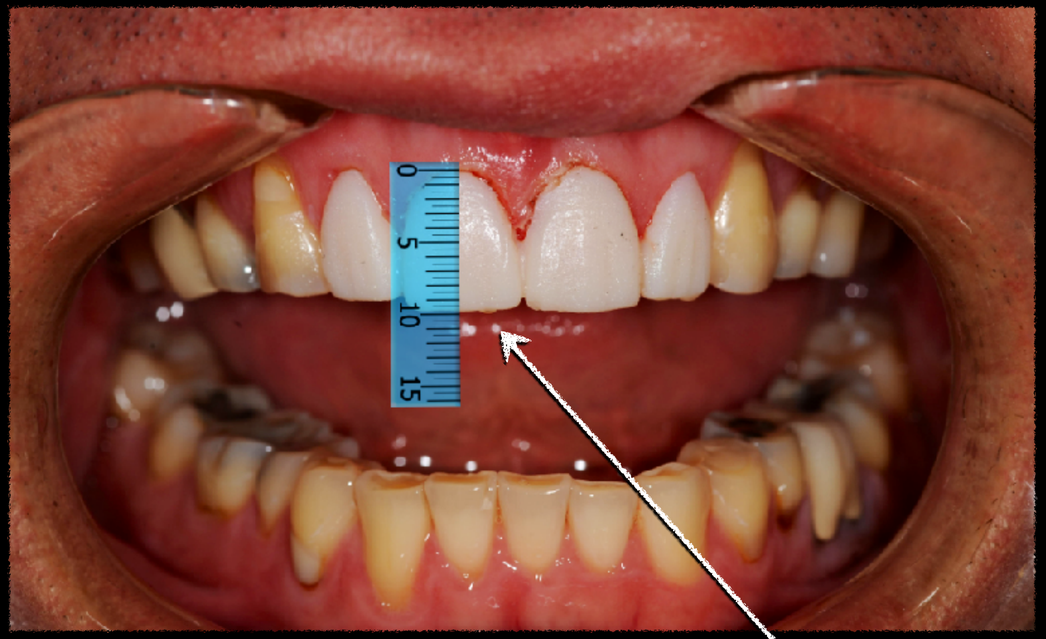
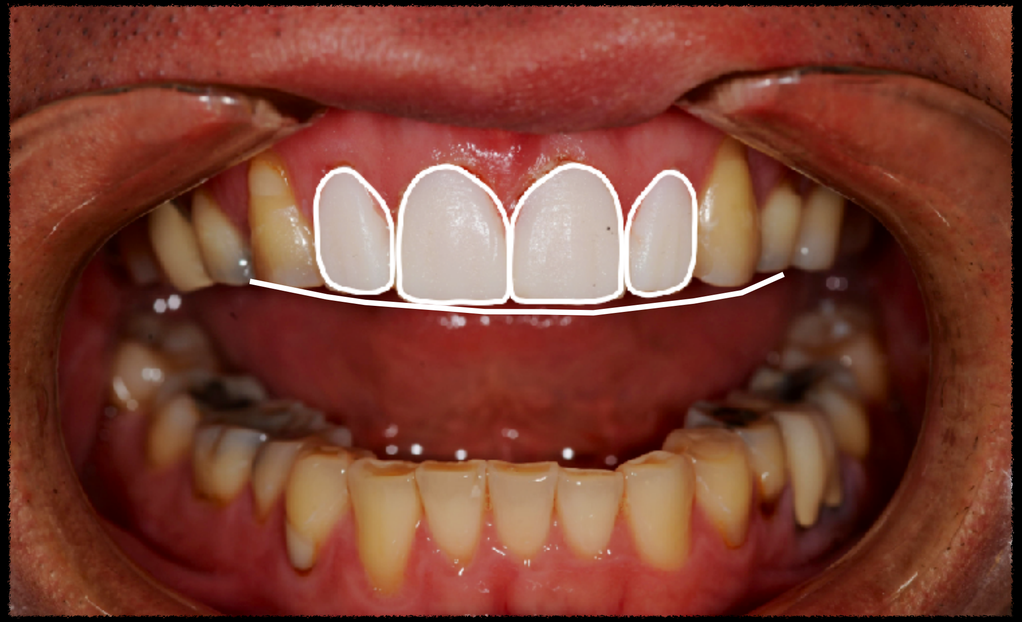
Case example 1



Confirm length at 10mm



Confirm with template design

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Case example 2

Poor esthetics due to retained deciduous tooth, peg lateral, asymmetrical gingiva and discolored teeth

Case example 2

Team employed

Periodontist
Orthodontist
Laboratory technician
Manufacturer
Patient
Staff

Case example 2

Need the interdisciplinary services of the periodontist, orthodontist and laboratory

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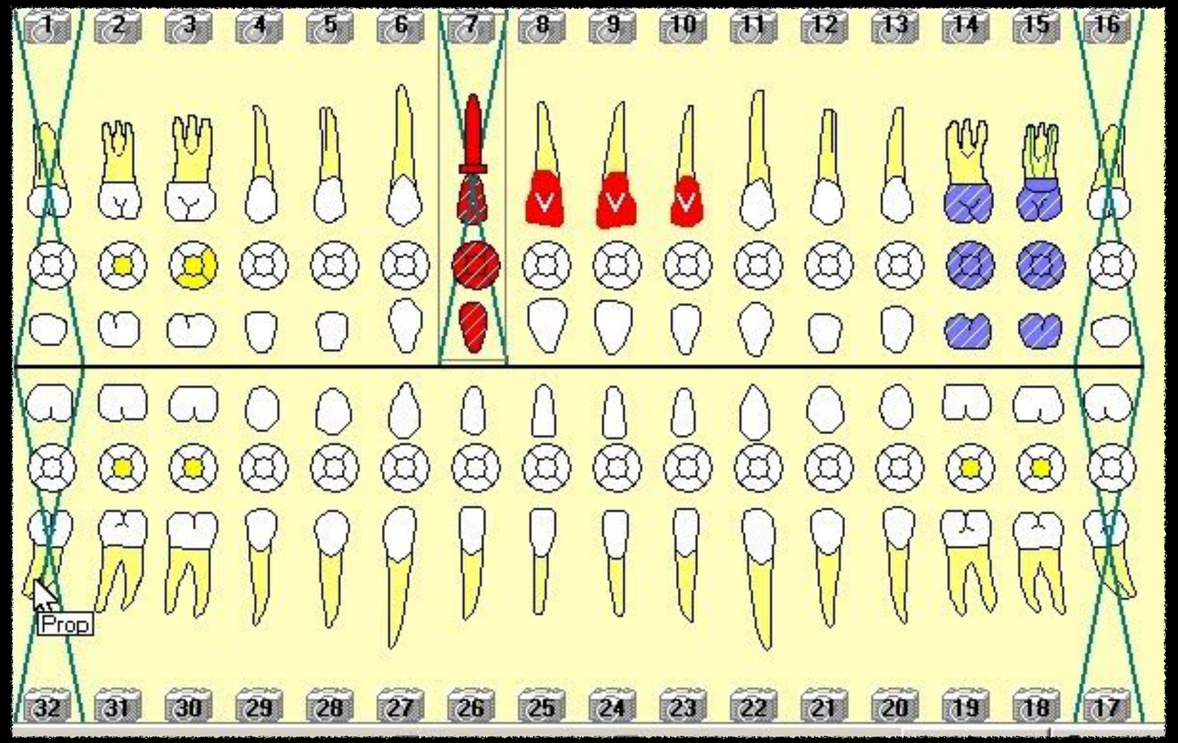
Case example 2



Accepted treatment plan

Examination with 2 & 3 dimensional design

Orthodontics to align teeth and gingiva

Remove #C, bone graft and implant placemen

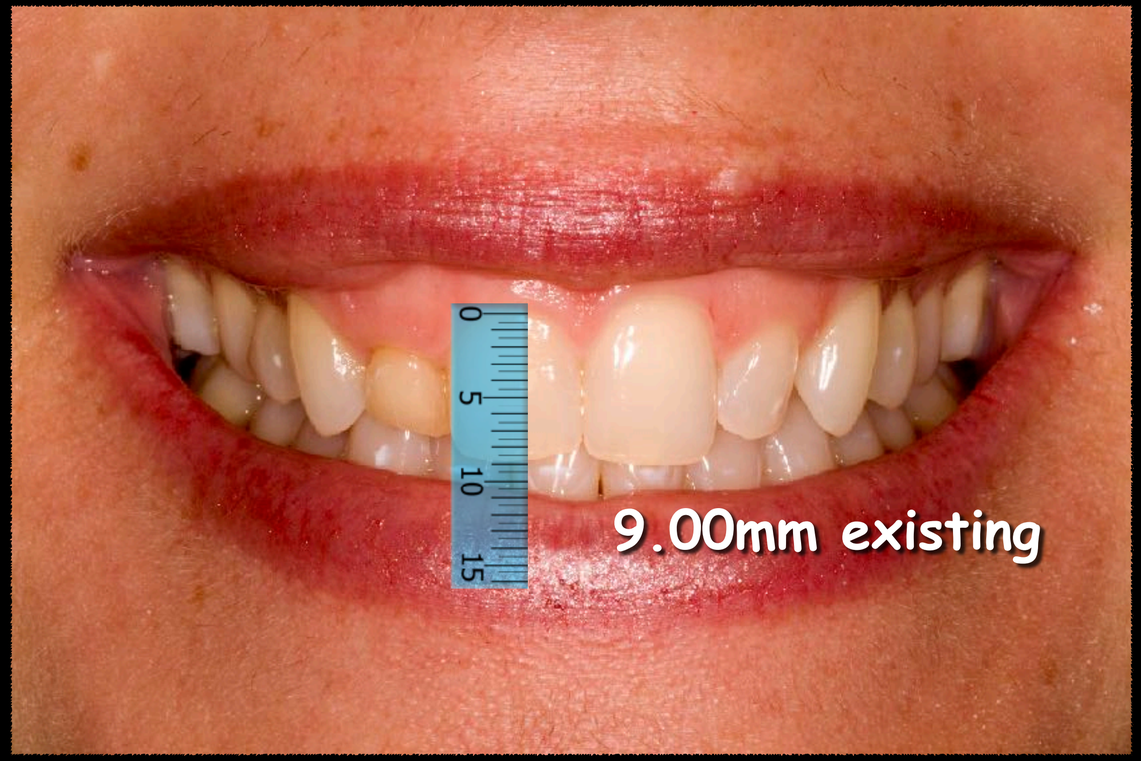
Bleach all the dentition

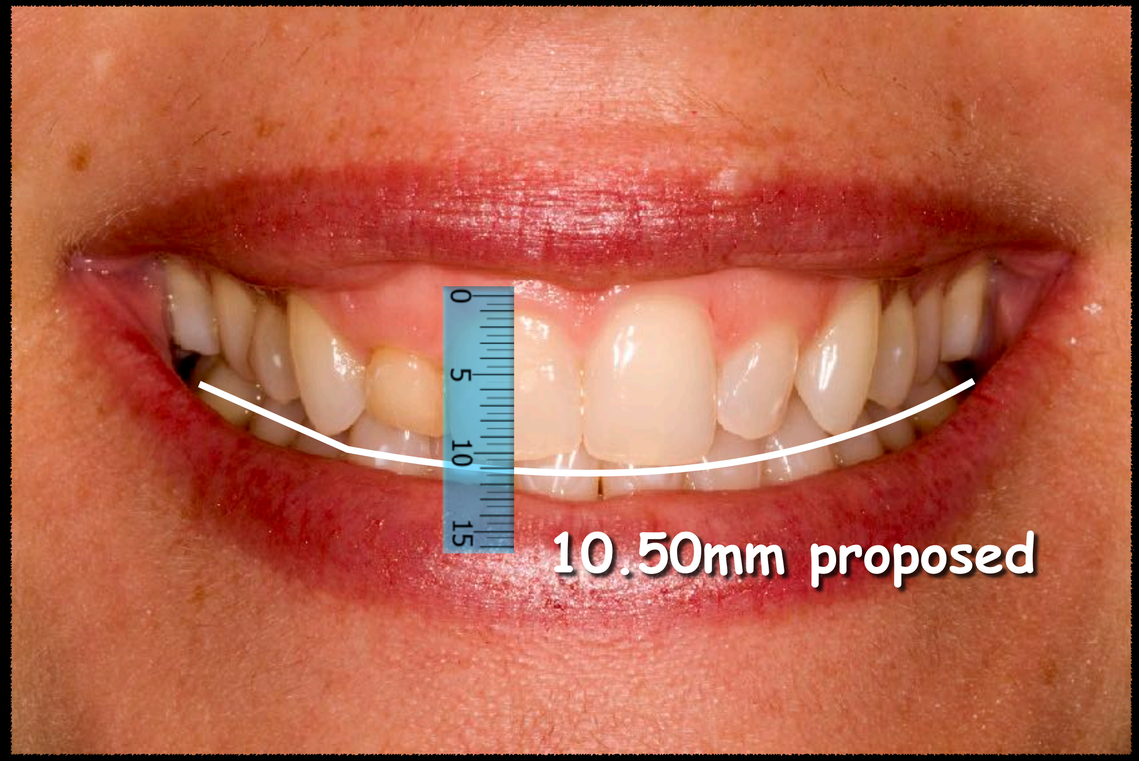
Custom ceramic abutment/crown #7

Conservative ceramic crown #10

Conservative ceramic laminates #8 & #9

Case example 2





Template design

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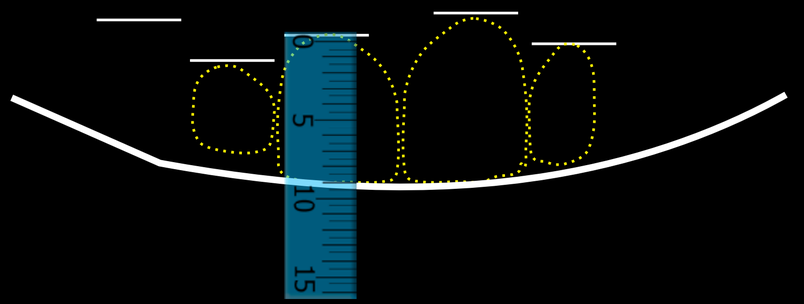
Case example 2



Existing

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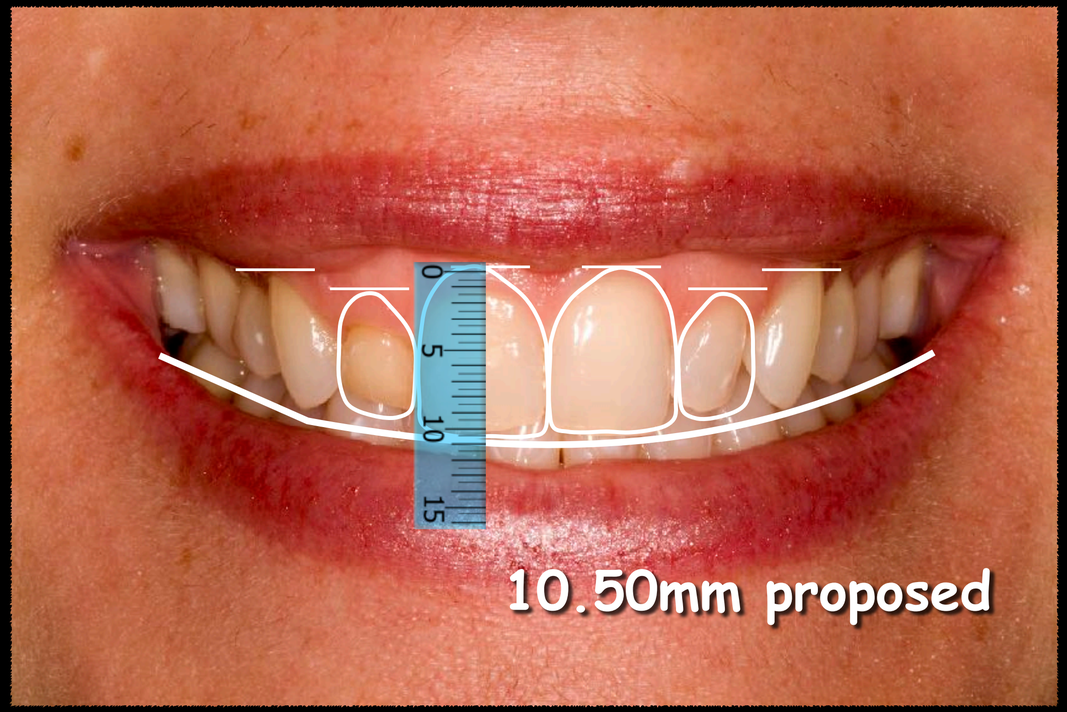
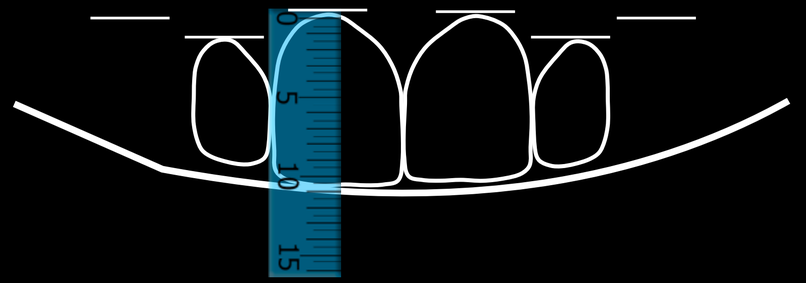
Case example 2

Computer simulation

Case example 2





Proposed

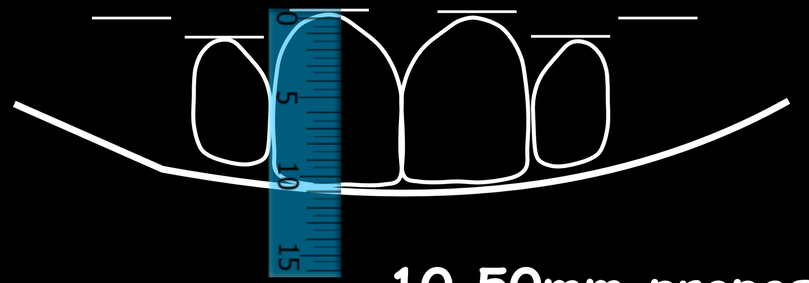
Case example 2

10.50mm proposed

Wax up should Wax up the template

Case example 2

Completed



10.50mm proposed

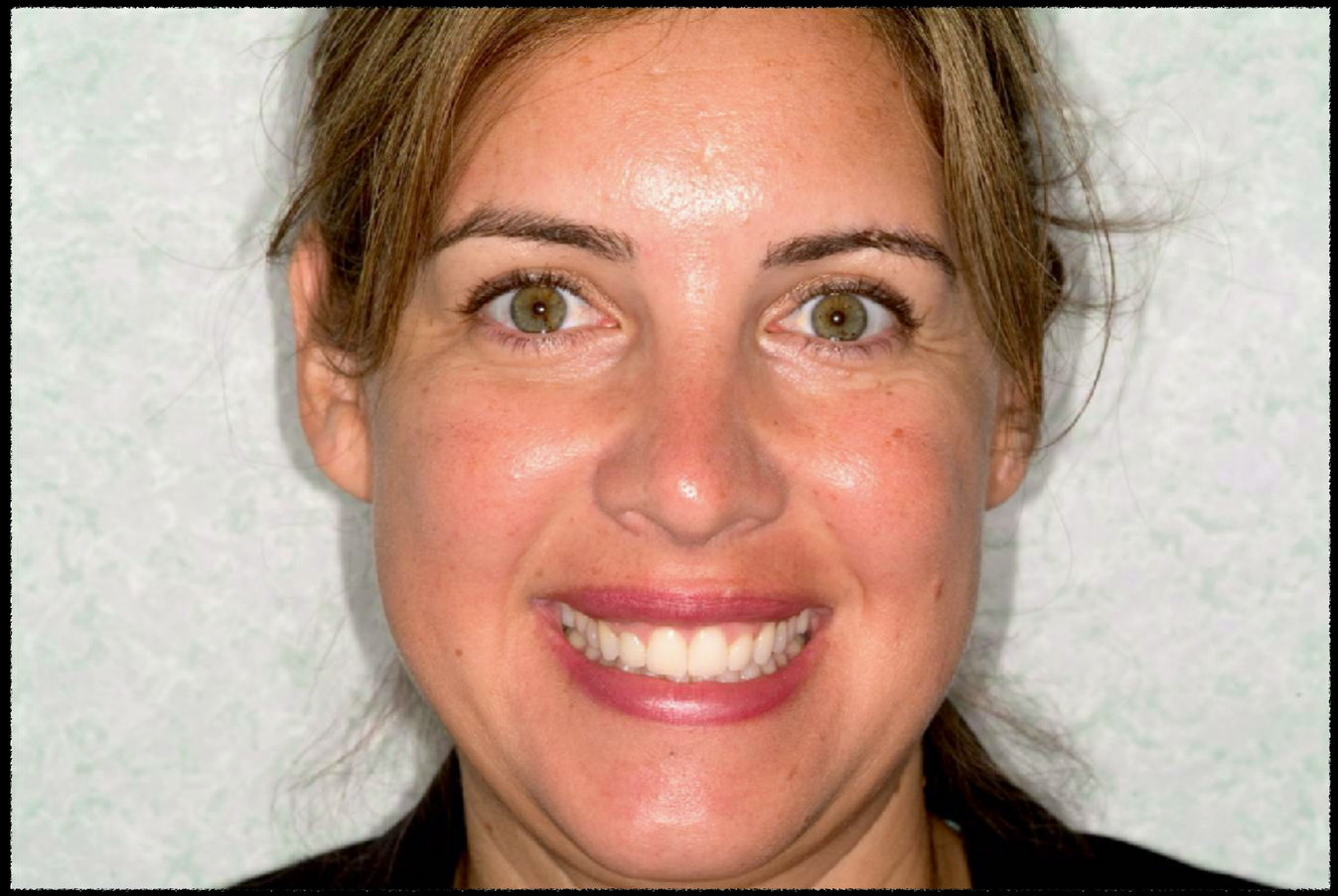
Completed up should match the template

Case example 2

Case example 2

Case example 2

Case example 2



Case example 3

Failing anterior bridge with fractured roots and significant periodontal disease with bone loss