University of Bolton
Teaching Intensive, Research Informed

Gingival recession

XX DATE XXXX

Faculty of
Health & Wellbeing

No.1 UNIVERSITY
IN GREATER MANCHESTER FOR STUDENT SATISFACTION
NATIONAL STUDENT SURVEY 2017

TEF Silver Teaching Excellence Framework

Prevalence:

In a US study of 9689 shows a recession of 1mm or greater for patients between 30-90 with 22.3% involved.

The simple theory behind this is plaque or poor dental hygiene? Not really.

Premolar teeth can present with the highest level of recession and it can be more prevalent on the left side of the jaw.

Higher levels of recession can be found in males rather than females and higher in Afro Caribbean than Caucasians.

Why would you provide?

‘Where there is generalised tissue loss as a result of periodontal disease or where there is significant variation in gingival margin heights the use of a ‘gingival prosthesis’ can dramatically improve aesthetics especially in those patients with a high smile line’ (Alani et al., 2010, p.64)

In dentistry, aesthetics refers to the appearance of natural dentition and/or dental restorations including its surrounding tissues and the ways to enhance it. It is very important to keep into consideration that dental prosthesis harmonize with the soft tissues and any remaining natural dentition whilst selecting materials, techniques for manufacturing and adding characterization to dentures (Kumar et al., 2015). Denture aesthetics is defined as:

> 'The cosmetic effect produced by a dental prosthesis which affects the desirable beauty, attractiveness, character and dignity of the individual' (Shenoy, 2018, pp. 956).

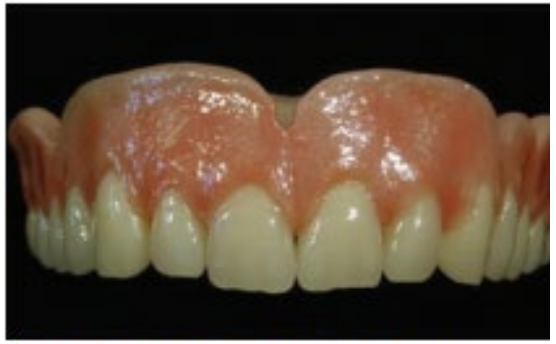
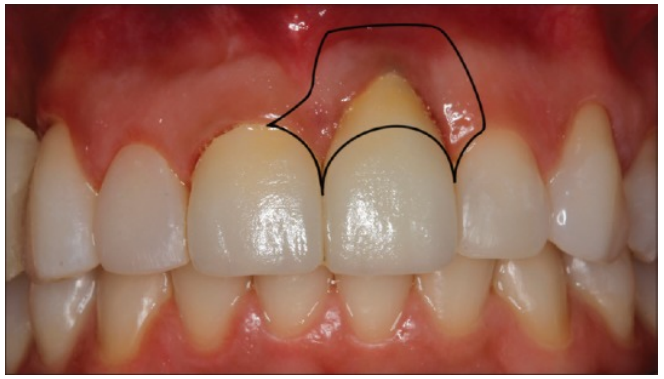
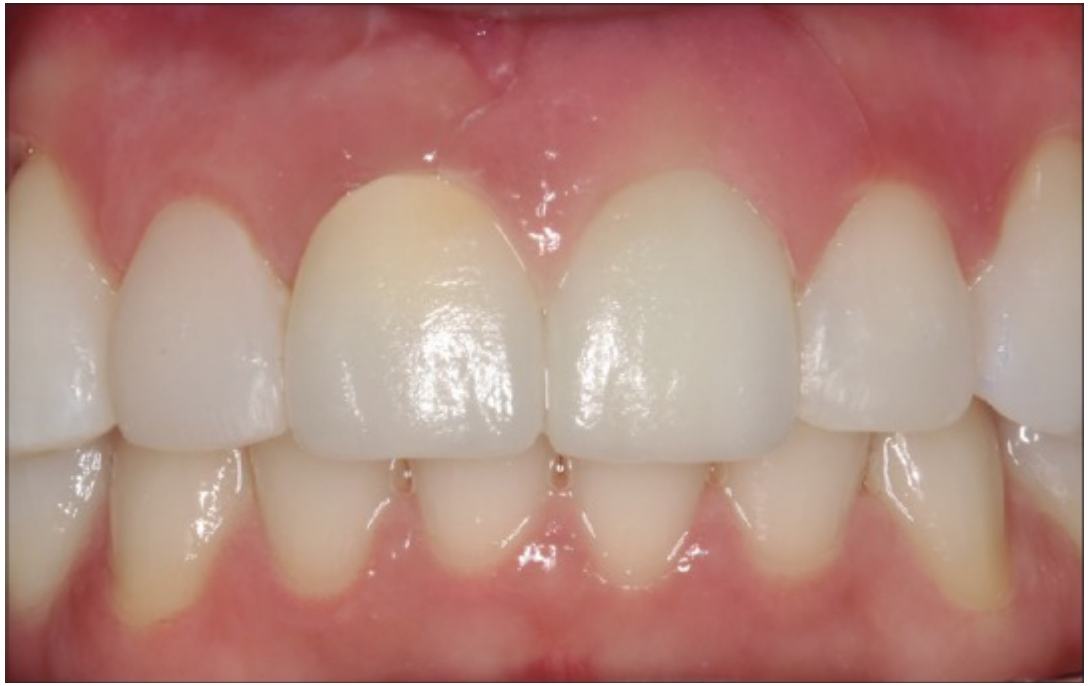


Fig. 21 Complete maxillary dentures recreating natural gingival appearance with realistic gingival architecture, stippling and root contouring

Why have I included dentures when this is a veneer?





‘When using gingival veneers, it is important to observe continuity between the artificial and the natural gingivae, minimizing the visibility of the interface and reinstating the gingival architecture and papilla form.[4] The gingival veneer is border molded during fabrication and fits passively over the labial hard and soft dental tissues.[9] The gingival veneer's stability is ensured by the pressure exerted by the labial musculature and by its close adaptation to the proximal niches, which favors prosthesis retention and prevents air escape.[27] Although such a prosthesis is considered auxiliary and is somewhat fragile, it can be made easily, with minimal additional effort and costs, to provide these patients with a greater sense of psychological satisfaction.[4]’
(Ankli et al., 2018)

Acrylic one can consider this material in the same way as a denture base-

Can be embedded in a denture in the form of a swinglock type device- this is particularly good for patients that have missing dentition (Alani et al., 2010).

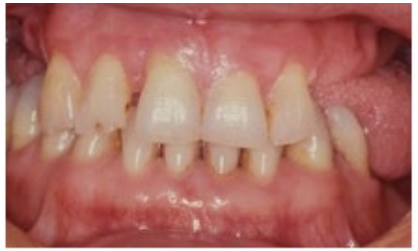


Fig. 19 Patient presenting with recession of the anterior segment resulting in varying gingival heights due to toothbrush abrasion

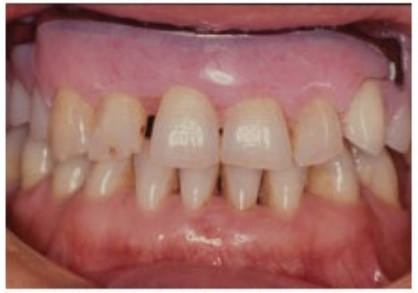
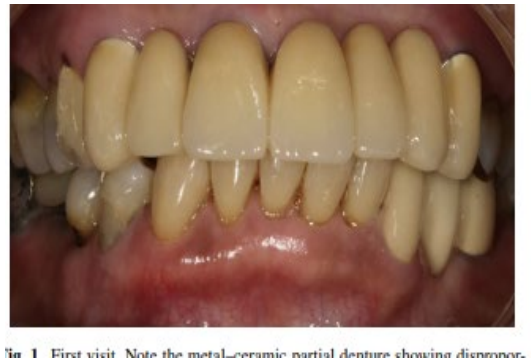
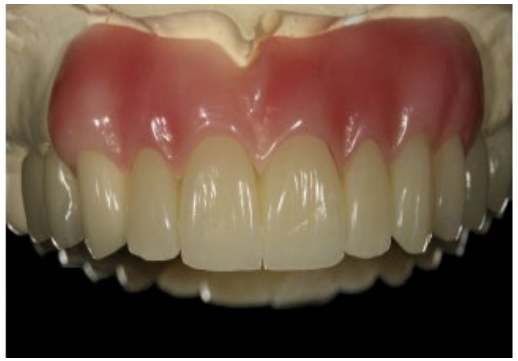


Fig. 20 A denture was provided which incorporated a swing lock component improving retention while also optimizing gingival aesthetics

- To make a denture look more natural, certain characterization can be incorporated to modify the teeth and denture bases by using different techniques such as staining and tinting, stippling effect, reshaping of incisal edges, alveolar eminence, contouring of wax, artificial palatal rugae and dynesthetic method (Pattanaik and Pattanaik, 2011; Chandna et al., 2016).





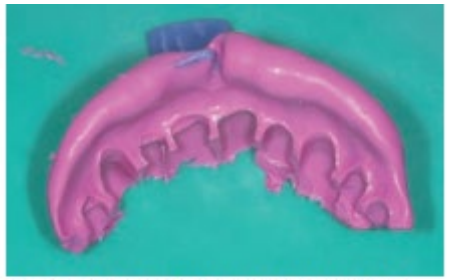
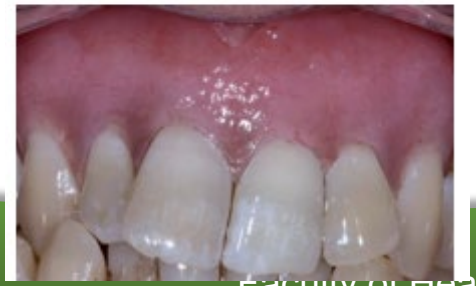


Fig. 12 A special tray was constructed to capture the buccal interproximal spaces and gingival profile



Images from Alani et al., 2010 and Ajita et al., 2011

When constructing an acrylic device it is likely to enhance aesthetics to utilise contouring and stippling. This however increases the surface roughness of the device making it prone to bacteria build up (Sahin et al., 2016)

Results of a survey with regards to general aesthetic perception revealed 31% of the people consider dental aesthetics to be an important factor, which is why it is often observed that aesthetic dental restorations have better success rates as it enhances overall patients' appearance (Ahrari et al., 2015).

What can we take from the second paragraph?

- Whilst mimics colour of tissue, PMMA is impacted by colour changes, coffee in particular, this is due to the absorption of the coffee colourants in the organic phase of the material. Although cross linking agents in the denture material can prevent this as it absorbs fewer colours. Treating denture base with sealants doesn't prevent the colour absorption and traditional pumice and police is superior and should be used when finishing (Sahin et al., 2016).

You may review longevity of acrylic colour stability!

Silicone materials

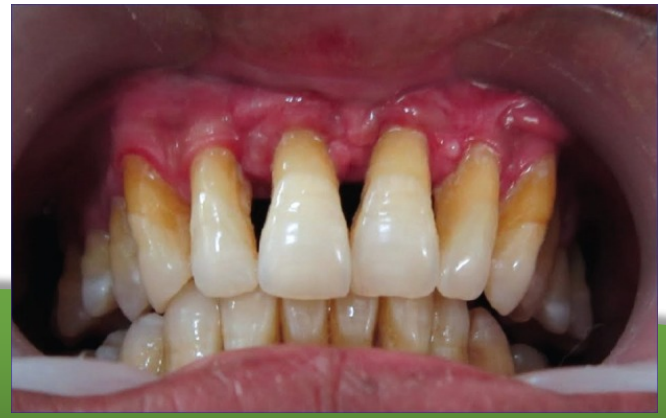
Silicone materials due to their porous nature are more likely to stain (Yalamanchili et al., 2013). Patients regardless of the material need proper care instructions such as smoking and drinking whilst wearing.

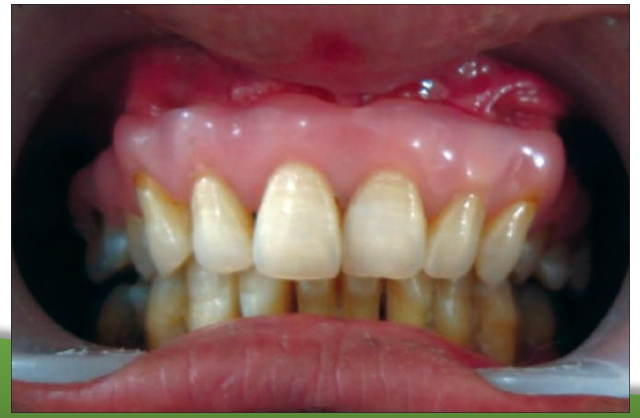
However are a softer material therefore when compared to PMMA is not going to be as painful to wear. Though regardless of this both material are likely to experience some movement, leaving the patient not ‘feeling’ themselves’ (Alani et al., 2010)

Silicones due to their nature are flexible materials, apposed to the rigid PMMA, this allows for patients who may have further recession for the appliance to be successfully extended, without the risk of fracture (Vinnakota et al.,2013).

It is possible to argue however, the aesthetics of the material in terms of colour is not as sound in this case, gingivamol is a silicone based material for this purpose but with very limited stains

https://www.detax.de/en/shop/produkte/Gingivamoll.php





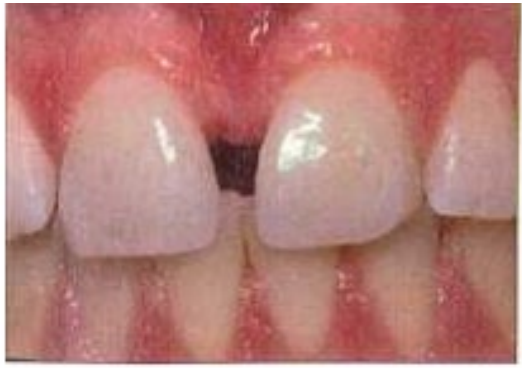


Figure 1: *Because of recent periodontal procedures, soft tissue is missing between the central incisors in this 25-year-old man.*

Figure 3: *Two prostheses were fabricated so that the best fitting and most esthetically pleasing prosthesis could be chosen.*

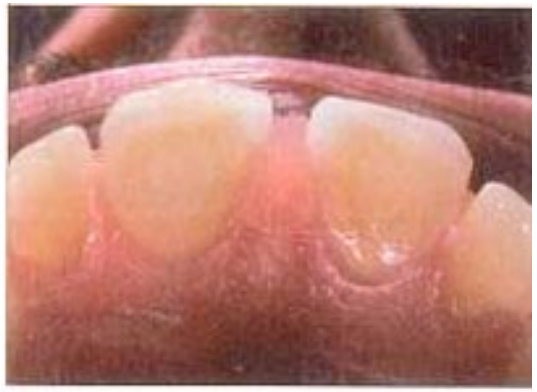
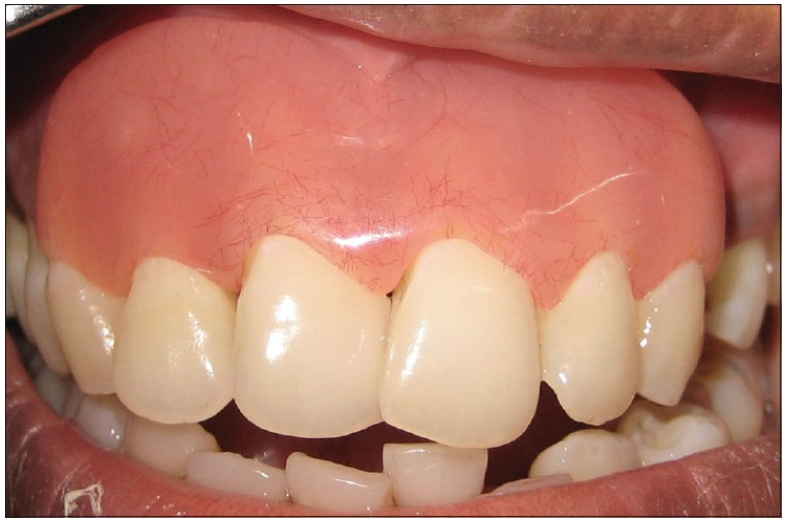
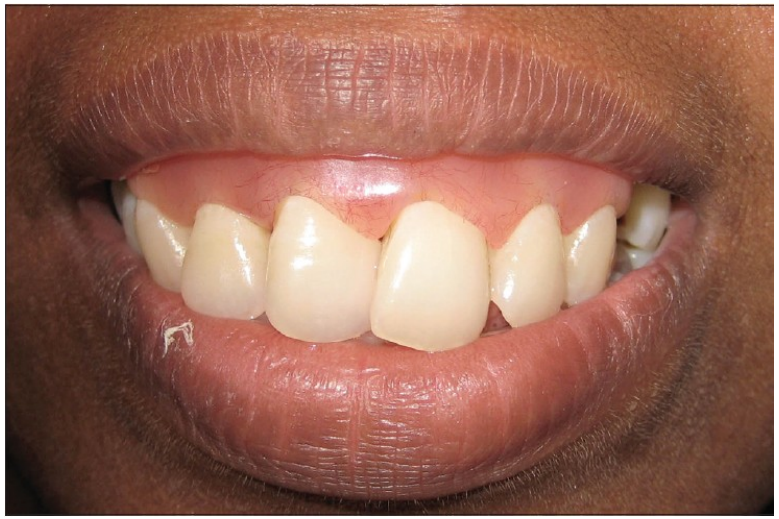


Figure 4b: *Occlusal view of Molloplast prosthesis shows good contour and tissue adaptation.*

For a patient who required a small veneer for phonetic issues two were constructed L, clear acrylic soft and R, silicone moloplast b (soft liner material) (Barzilay and Tamblyn, 2003). The aesthetics of the silicone was seen to be superior- however was this a like for like comparison in materials?

The softmaterial was required so the appliance can embed in between and behind the centrals- Heat cure pmma couldn't do this and there are no further recession to warrant a larger PMMA material





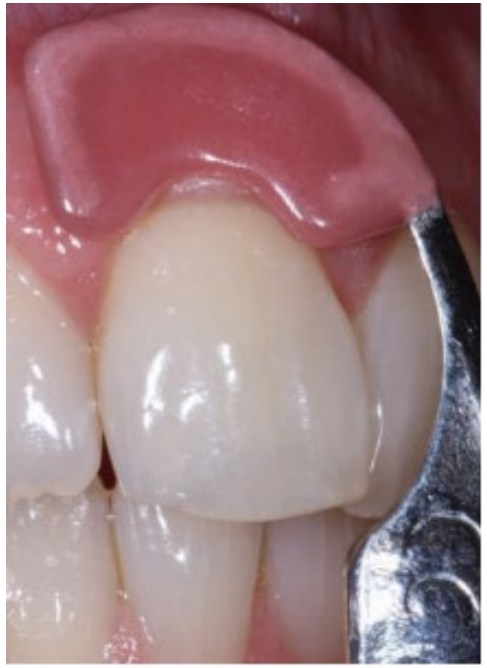


Fig. 26 Laboratory constructed tab mimicking the arc of the gingival margin to aid in shade taking

Changing of the role:
Technicians more so than ever need to be aware of and support patients aesthetics, firstly skill set development. Knowledge of the anatomy and form- some of the presented cases are almost 'invisible' others are clearly an appliance

Secondly working with the clinician to create additional things such as shade tabs. Helping to select the correct material for the case.

Whilst a small appliance, technicians require an excellent skill set to manufacture correctly and it is possible for the patient to visit the laboratory for correct shade taking- explore failure rates in dentures due to aesthetics apply this to your work

Images (Sanghavi et al.,2014; Ajita et al., 2011).

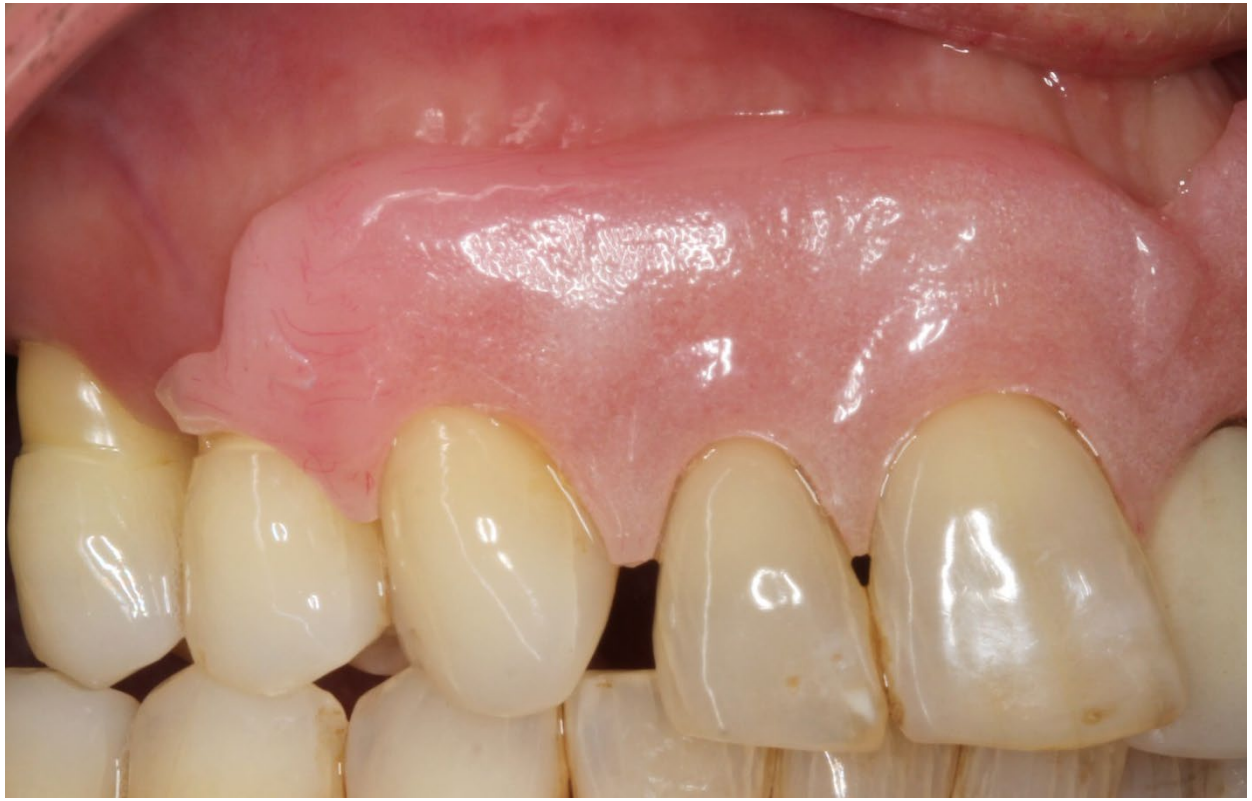
THINK ABOUT AESTHETICS

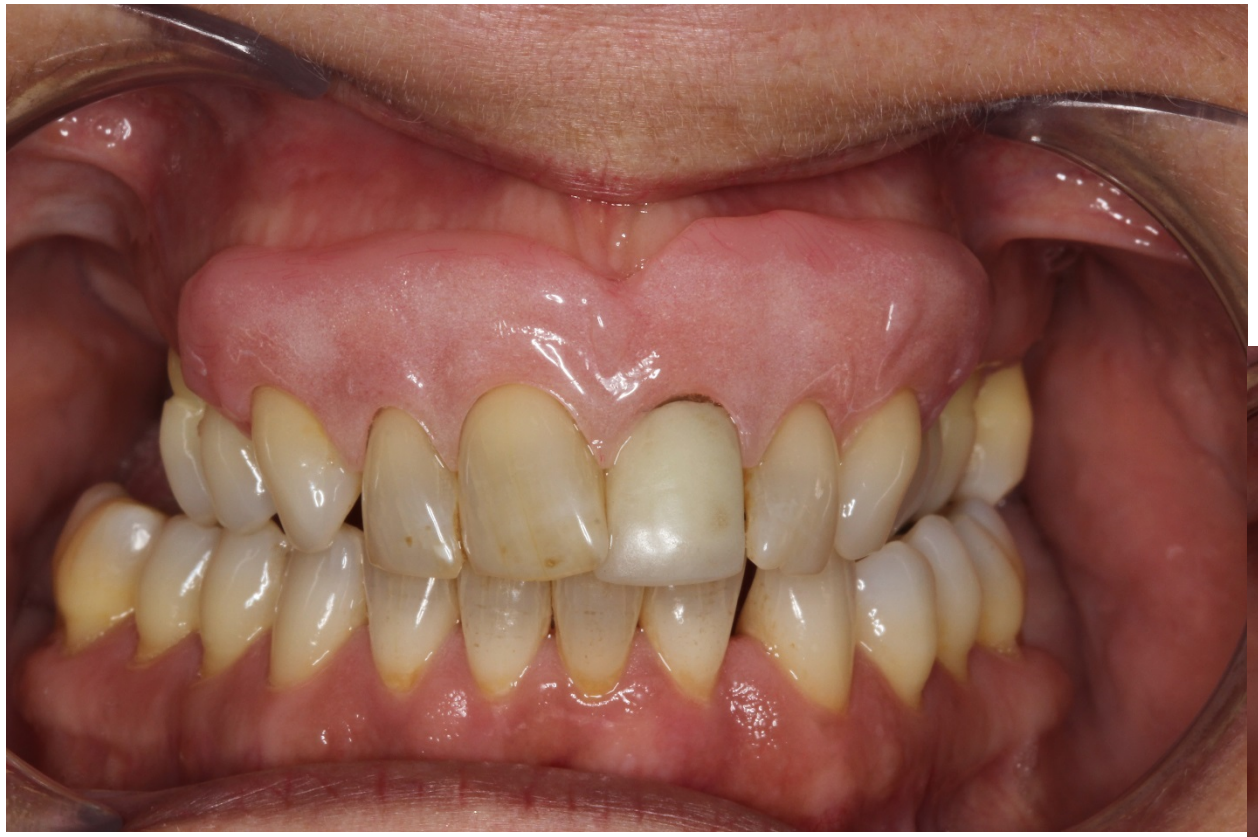
Crown length.

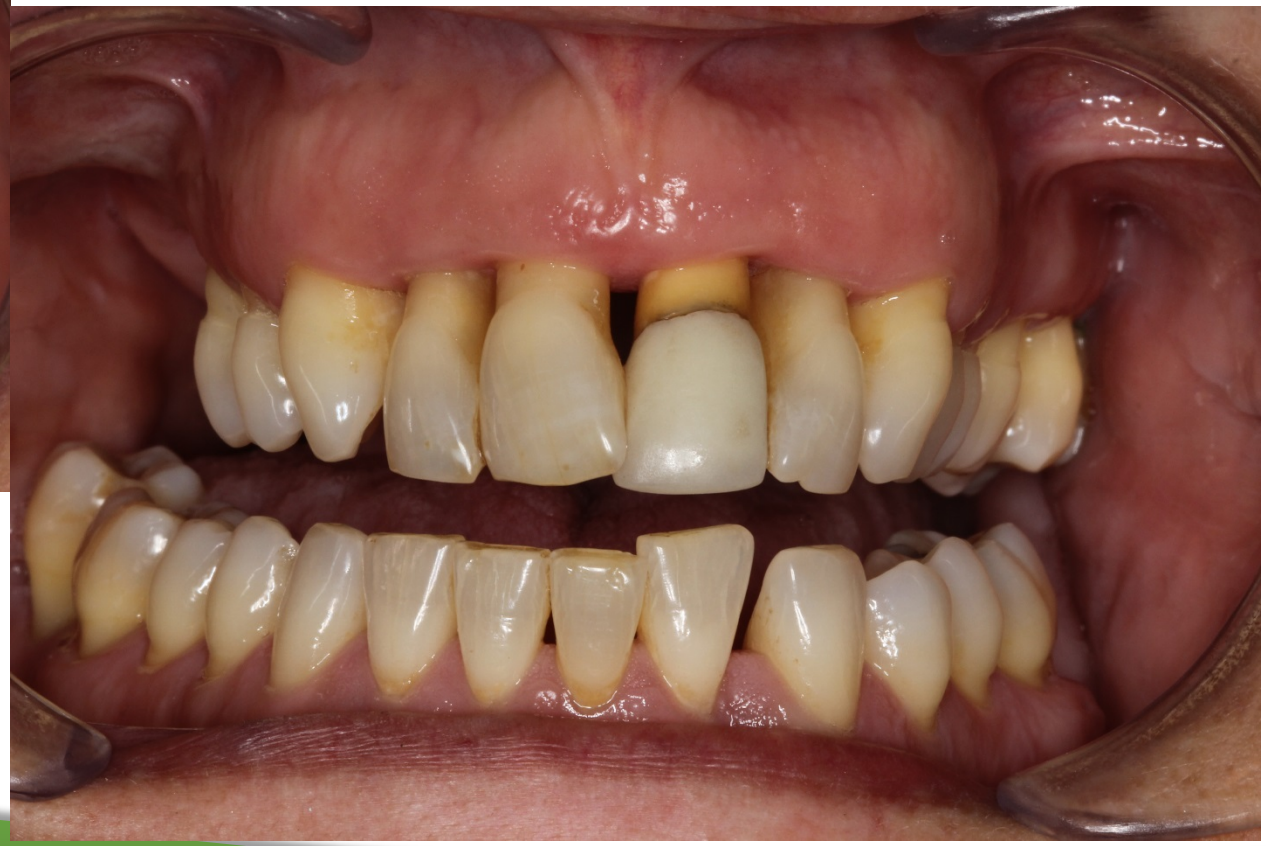
Diastemas.

Do all black triangles need to be removed- look at the opposing arch.

Thickness of appliance- if minimum bone loss then this will bulk out the lip.







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