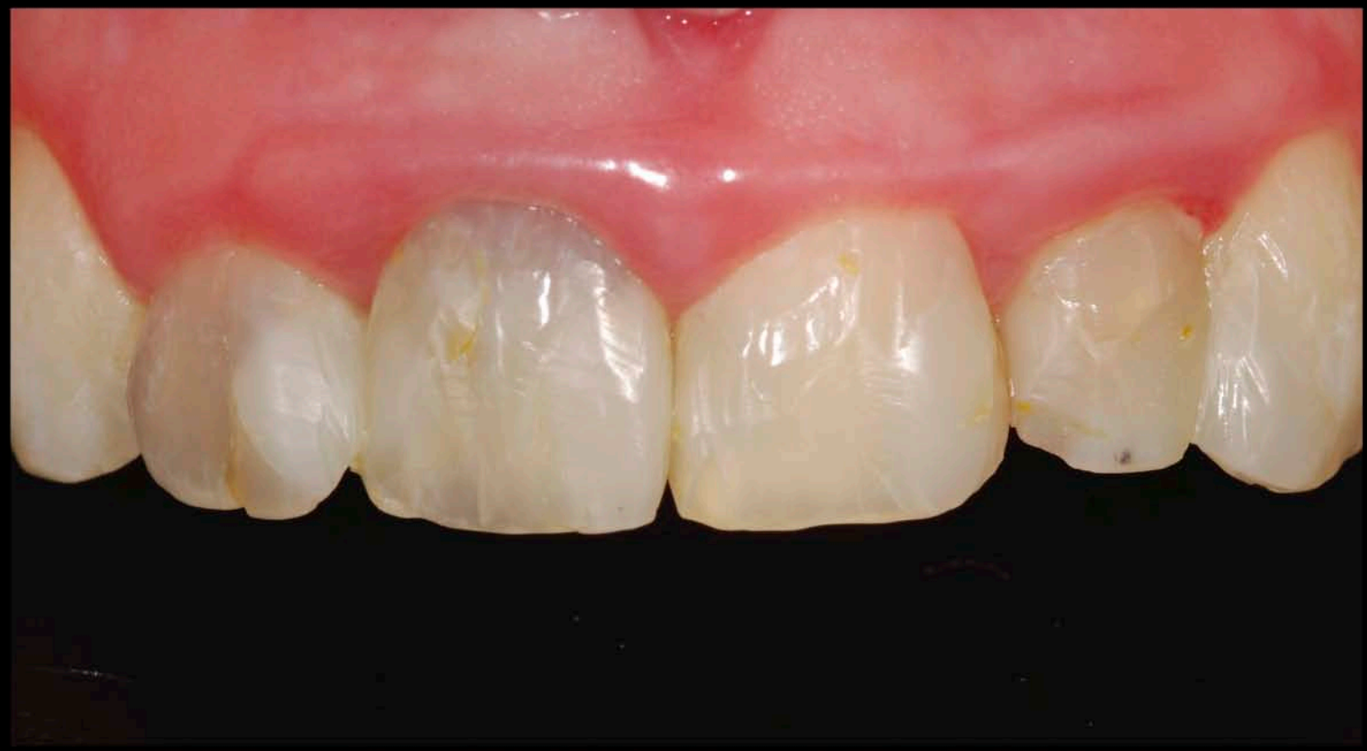
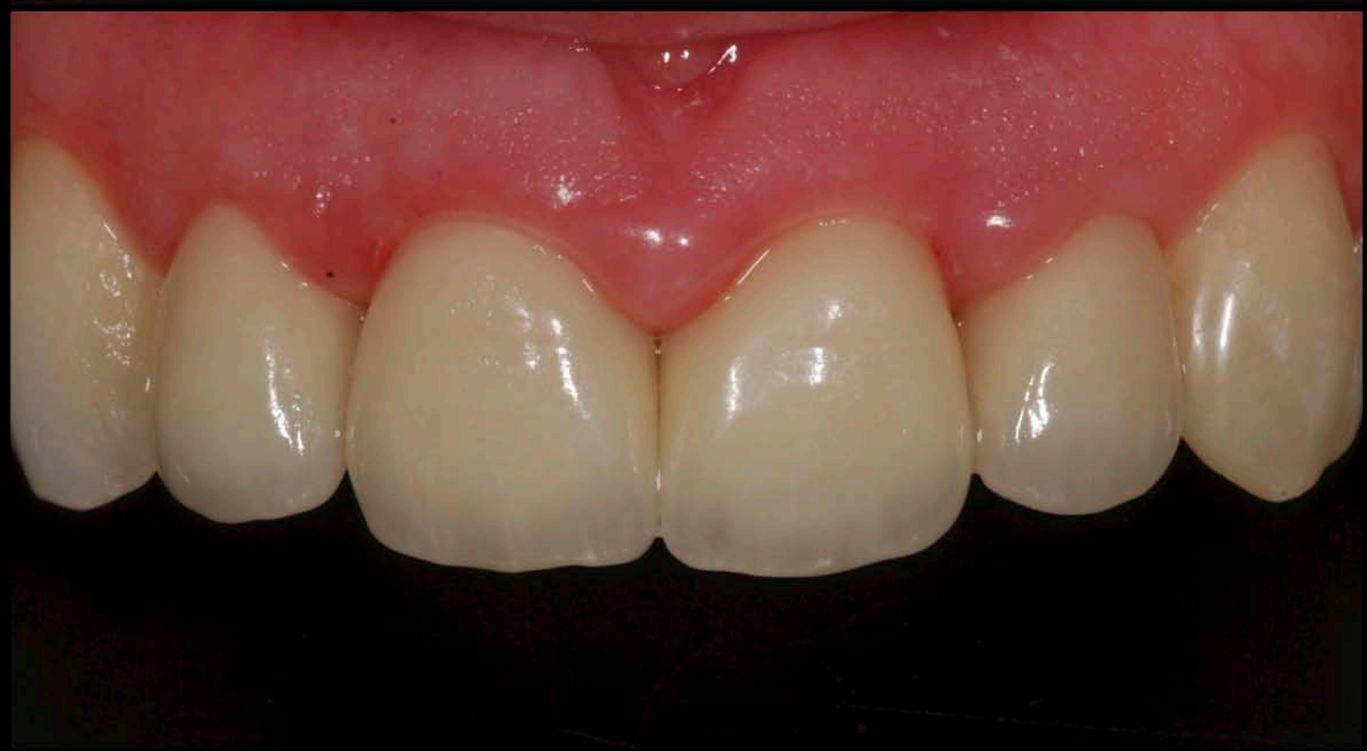
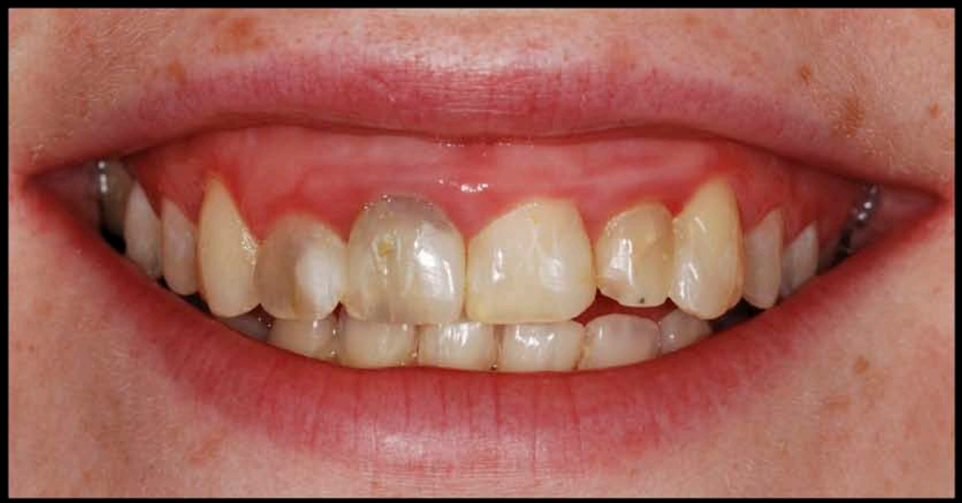




Surgical Perio, 2 RCT, Non-vital whitening, 4 E-Max crowns

Miss N

# History



Miss N presented as a new patient concerned about the appearance of her front teeth

Medical History - Clear

Social History - NAD

Dental History - Attended the dentist every 6 months

Extra - Oral Examination

- Jaw deviates to the left on closing
- no TMJ clicking/crepitus/pain
- no swelling/asymmetry/tenderness
- no headaches

Intra Oral Examination

- Very heavily restored dentition for her age
- OH was fair
- Soft tissues were healthy

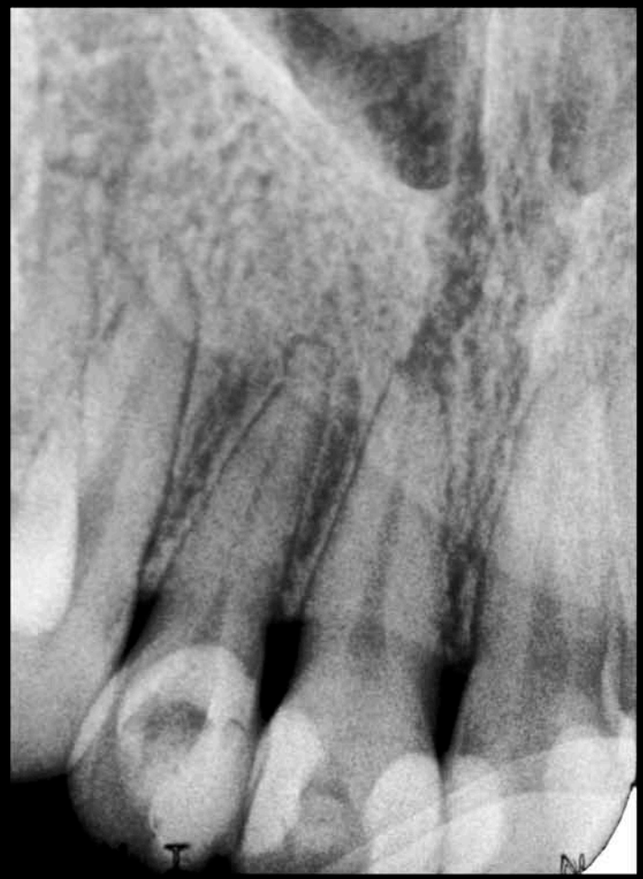
Occlusion

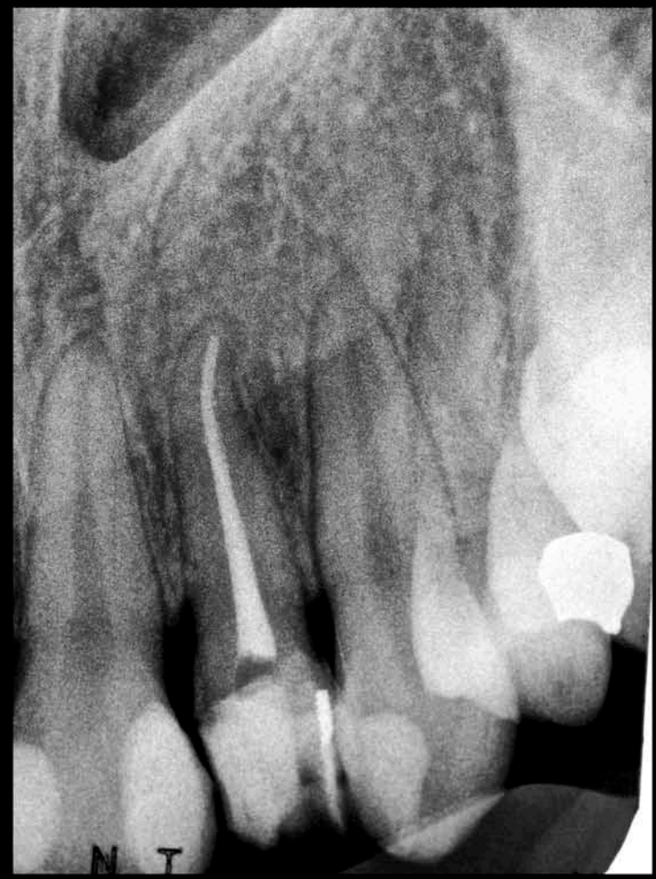
- First point of contact in RCP is ML cusp of 28 against DB cusp of 38
- Slide to ICP is mainly vertical though there is a slide to the left
- Lateral guidance to the right is initally group function and is then guided by the canine
- Lateral guidance to the left is canine guidance
- there are no WI / NWSI
- Skeletal base 1

Special investigations

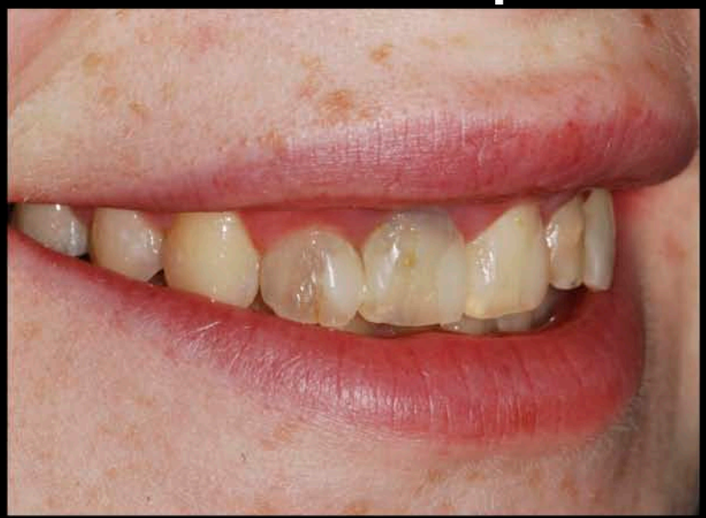
12,11,22 respond negative to endofrost

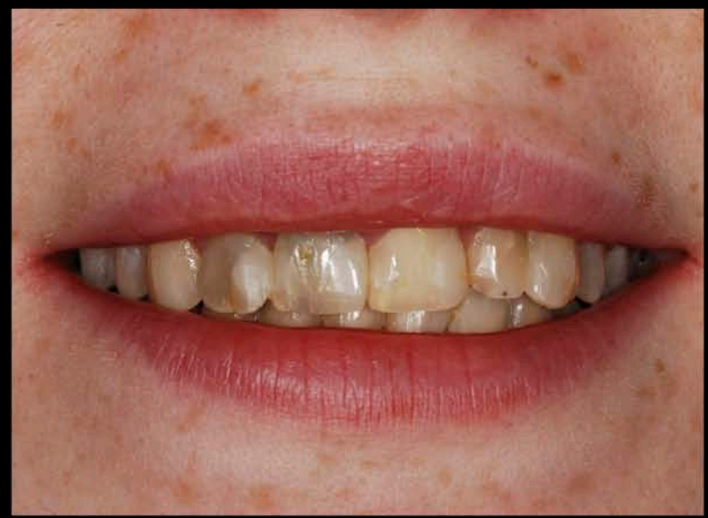
Bone mapping under LA shows that bone is 3mm below gum level 12-22

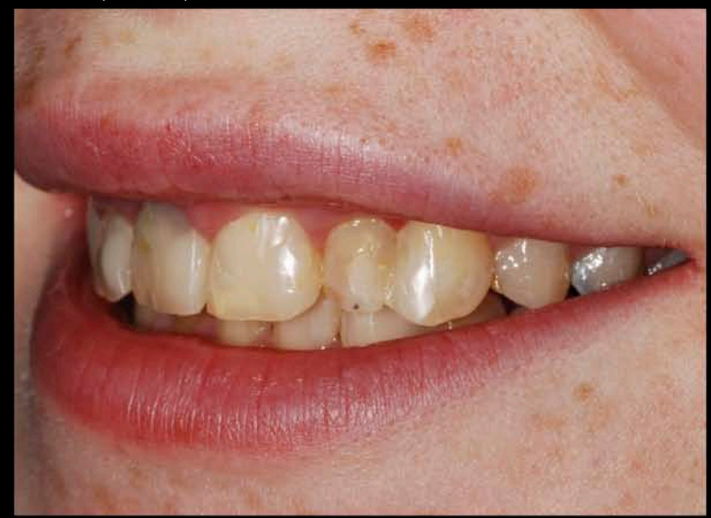


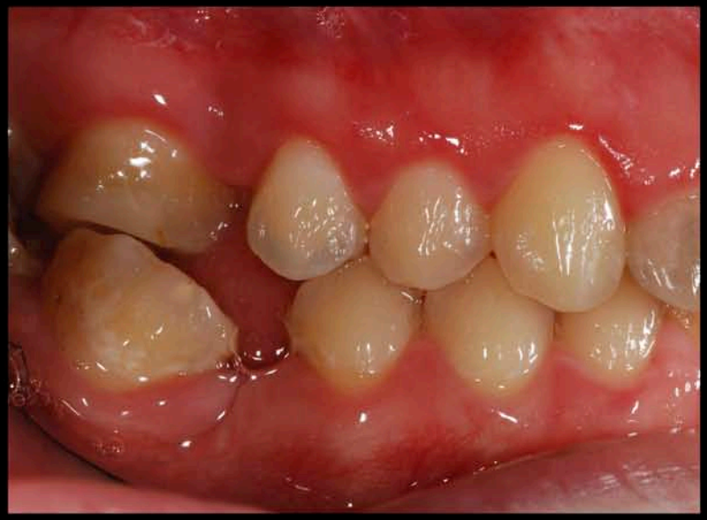
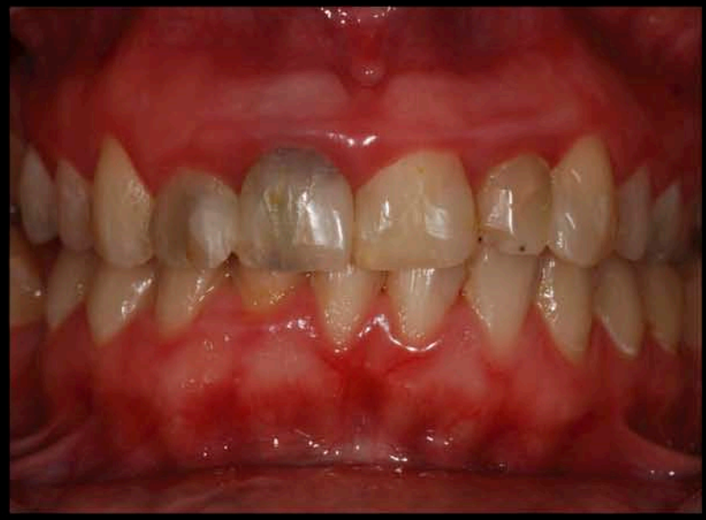
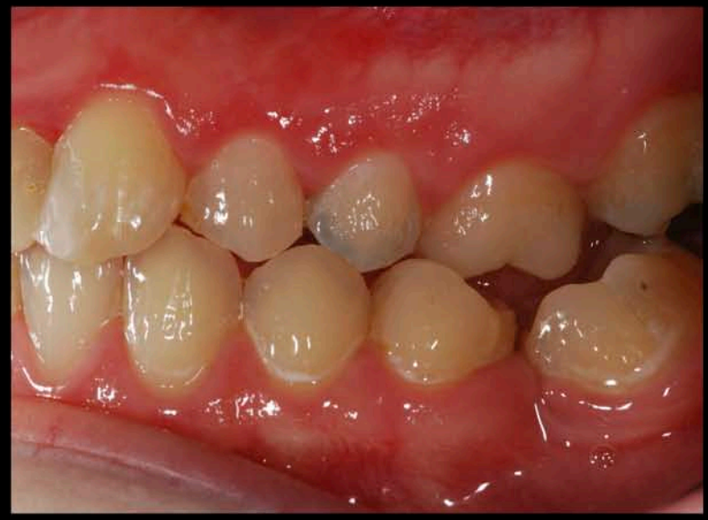


# Periapicals and Extra-Oral Photos 24/2/12

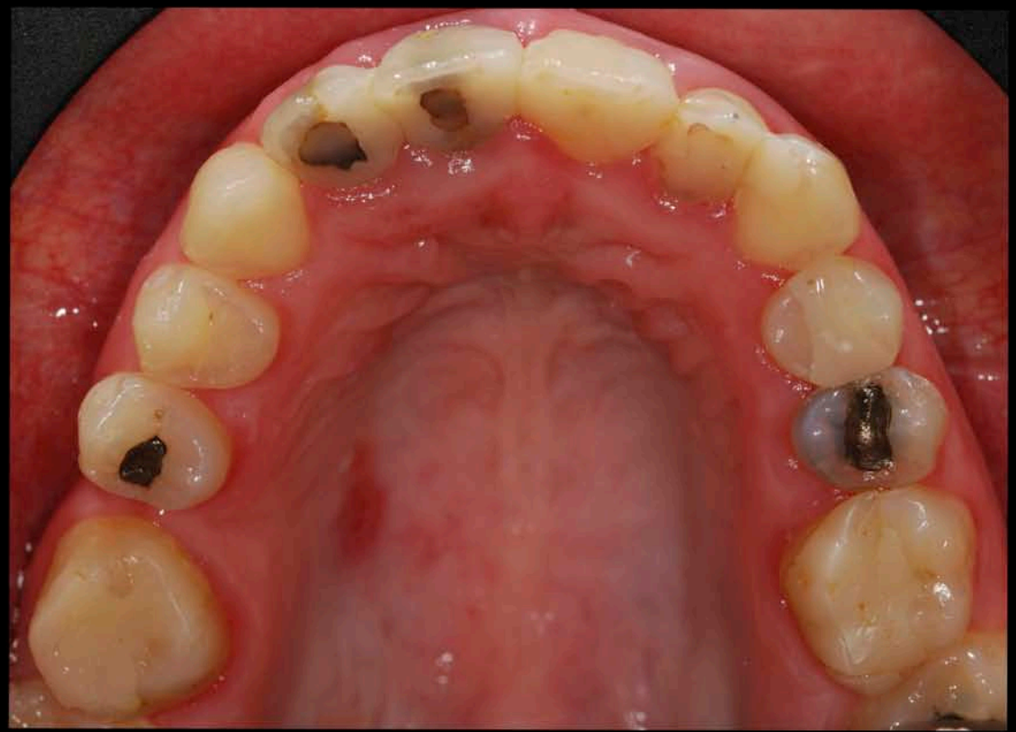
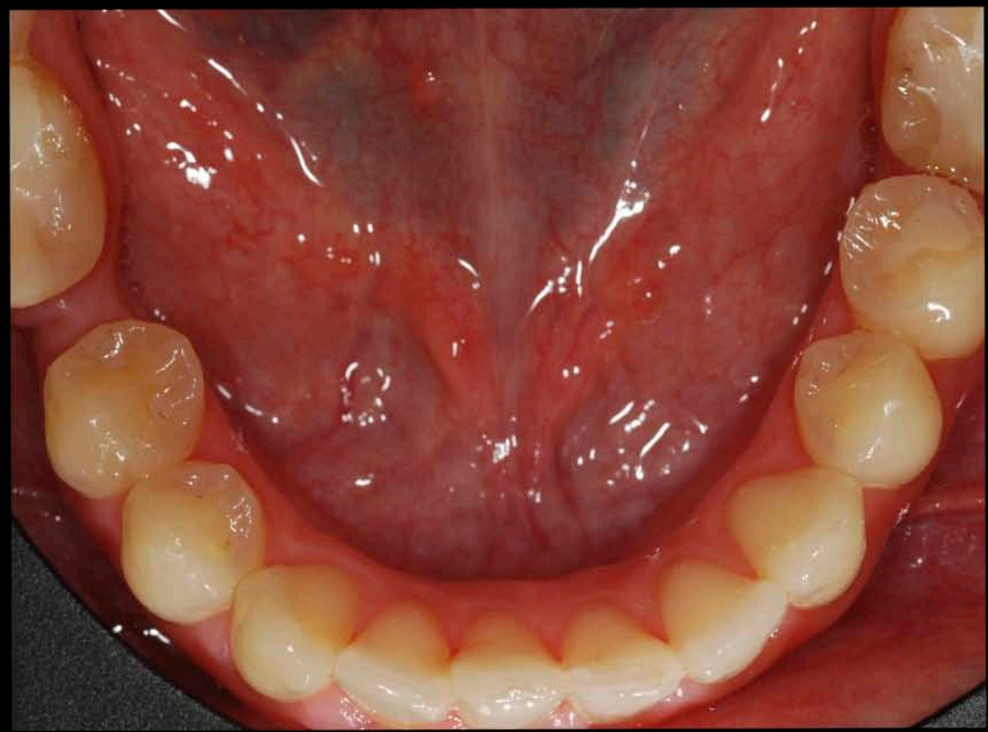






# Intra-Oral Photos 24/2/12

# Treatment Plan

## Radiograph Results

- 12,11,21,22,23 are all heavily filled
- 22 has got a good root treatment though there may be a slight area of residual pathology
- 11 appears to have peri-apical pathology while 12 already appears to have been accessed for root canal therapy
- Bone levels are good however fairly short roots would contraindicate excessive bine removal for crown lengthening

## Treatment Planning

The aim of treatment with miss N was to improve the appearance of the front teeth and to bring the caries rate under control.

Oral health instruction and diet analysis (see appendix) were carried out and appropriate advice given. A single tufted toothbrush was advised around 12 to see if any recession of the gum could be achieved by reducing the inflammation

Given the extent of the restorations currently in the front 4 teeth crowns are indicated. Prior to constructing the crowns 12 and 11 will need root canal therapy and non vital whitening.

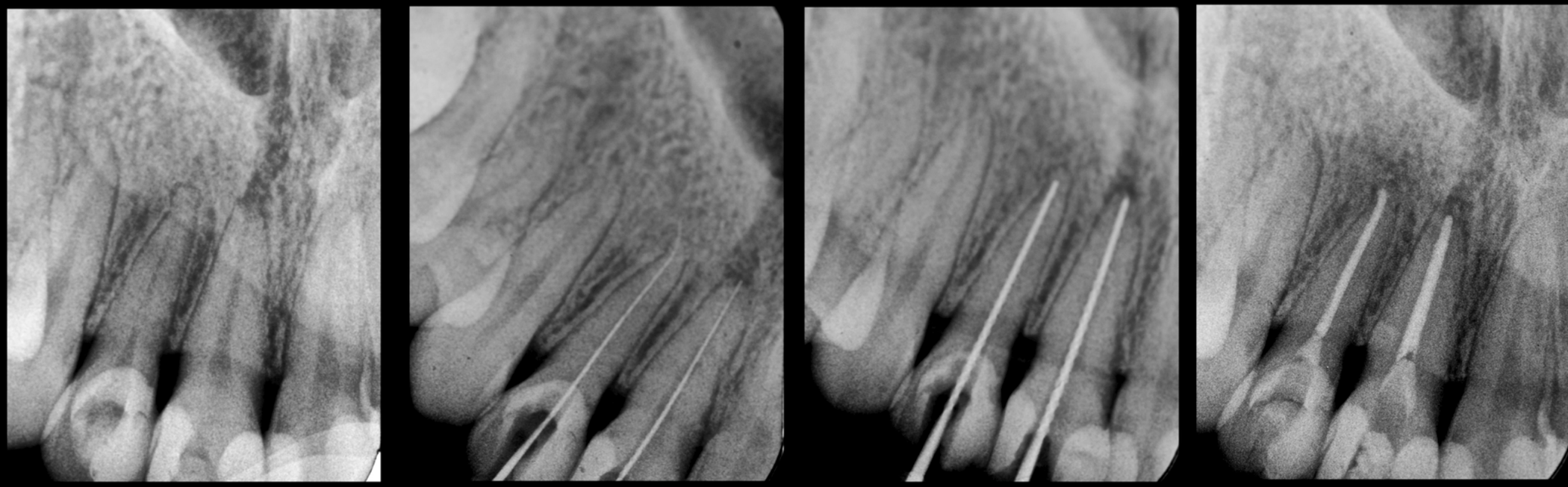
This will allow the placement of highly aesthethic E MAX crowns that do not need to be subgingival to hide a discoloured root. The rest of the teeth will also be whitened with a conventional tray method.

To improve the appearance of the teeth further we will change the proportions of the teeth, 12 in particular appears to be a short and wide tooth. To lengthen the teeth the crowns will be longer coronally.

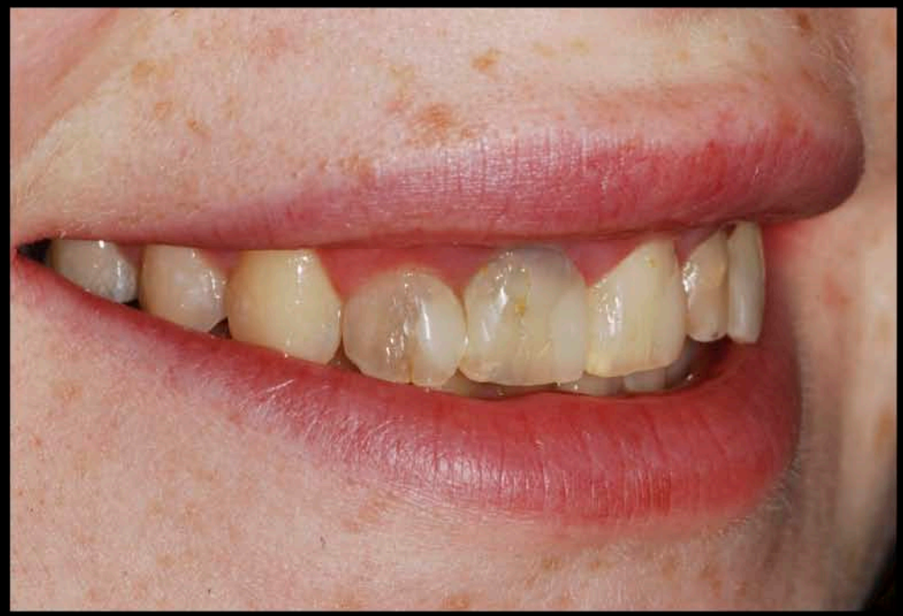
This however will not correct the mismatch in gum heights between the 13 and 12. While the gum around 12 is inflamed as bone sounding shows the biologic width is normal little recession can be expected when the OH improves. Crown lengthening is ideally required.

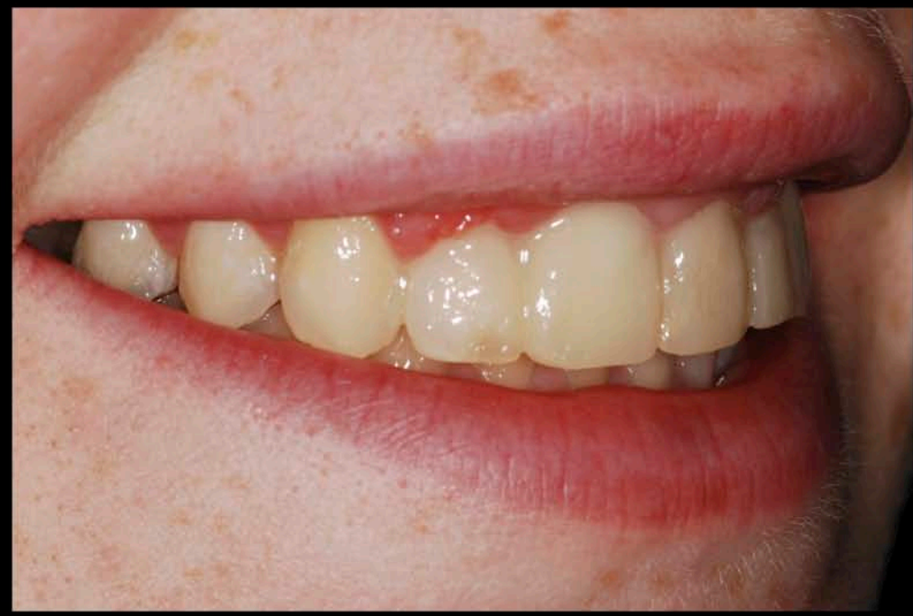
A treatment letter was sent to Miss NM1187 to outline the treatment (see appendix)

# Root treatments of 12,11

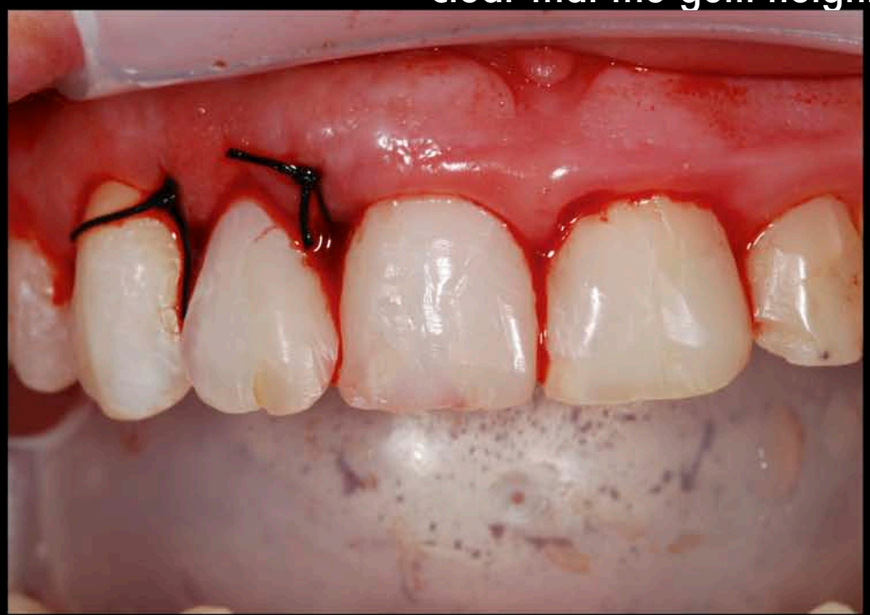


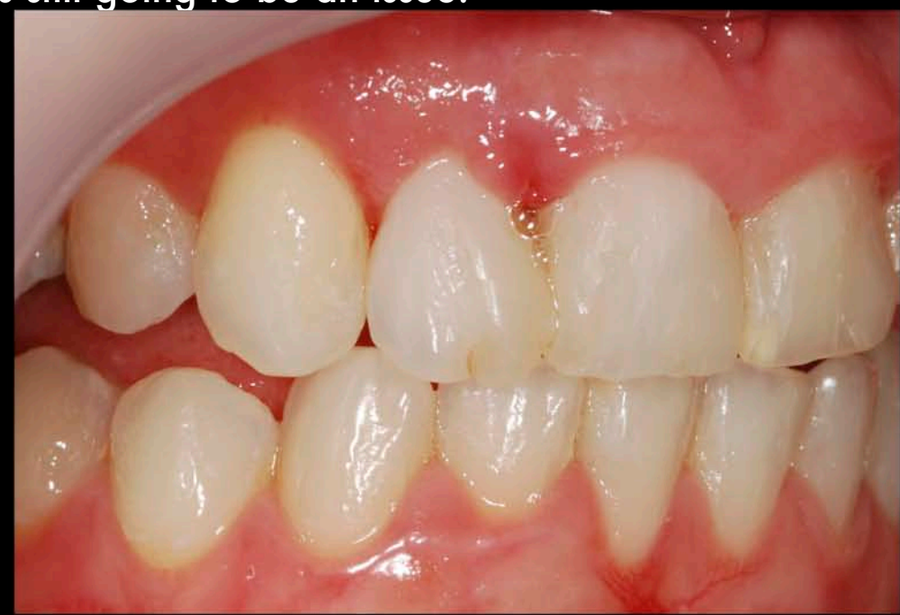
Anesthesia was administered, rubber dam applied and access gained to 12,22. Working length was determined by apex locator and verified radiographically with size 10 flexofiles. 12 was worked to MAF 45 @ 20.5mm, 11 was worked to MAF 55 @ 21mm while maintaining patency. Lengths were then verified radiographically. Constant irrigation with 5% hypochlorite was used throughout, a final irrigation with 17% EDTA was used to remove any smear layer. Obturation was avhieved via cold lateral condensation. The coronal GP was removed to 2mm below the CEJ and 2mm of GI was placed to cover the canals. A check radiograph was taken at this stage showing a good RCT on 12 and the RCT on 11 is perhaps 1mm short. These teeth along with 22 were then internally whitened over a number of visits using a mixture of sodium perborate and 10% carbamide peroxide. This non vital whitening was very effective. Following the whitening the access cavities were temporised for 1 week and then filled incrementally with a flowable composite.





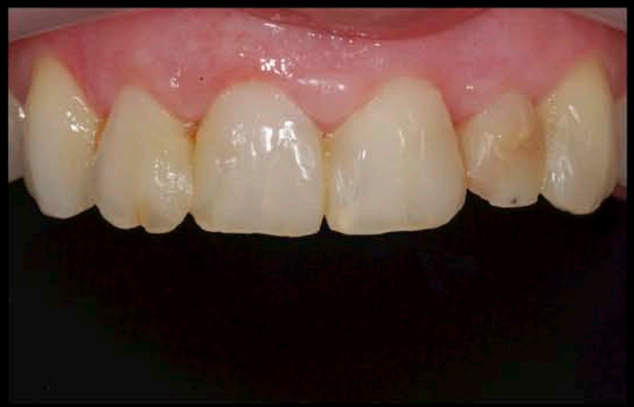
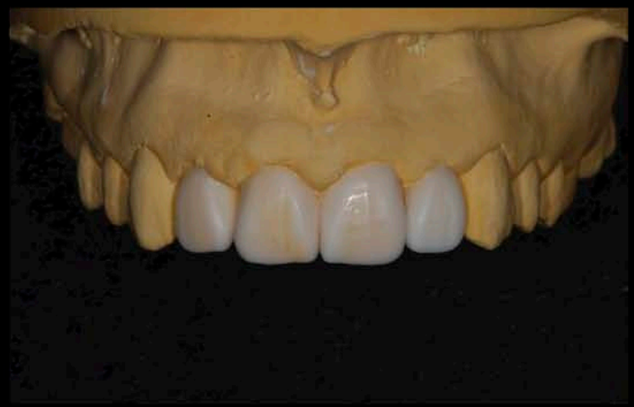
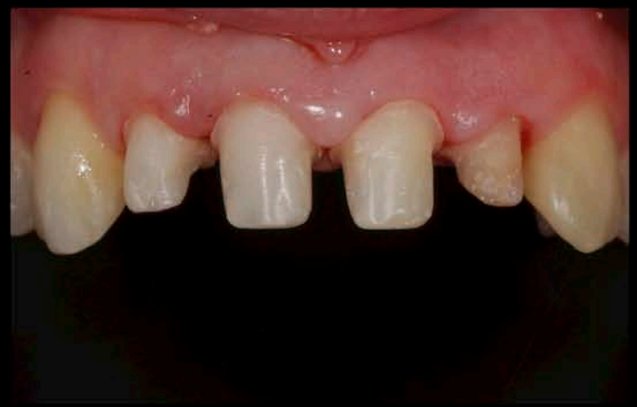
As Miss N was not quite sure whether she needed crown lengthening surgery we constructed a diagnostic wax up to show her what result could be achieved by lengthening the crown's coronally alone. This was then transferred to the patients mouth using a silicone index. While this brought about a huge improvement it was clear that the gum height around 12 was still going to be an issue.



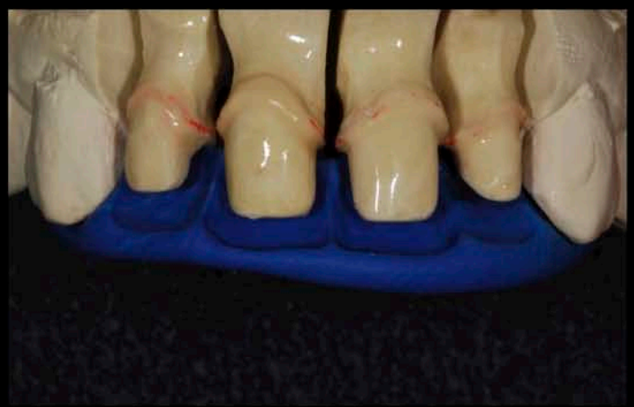
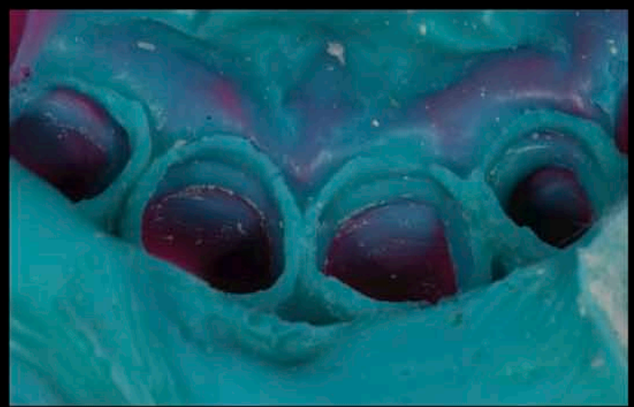
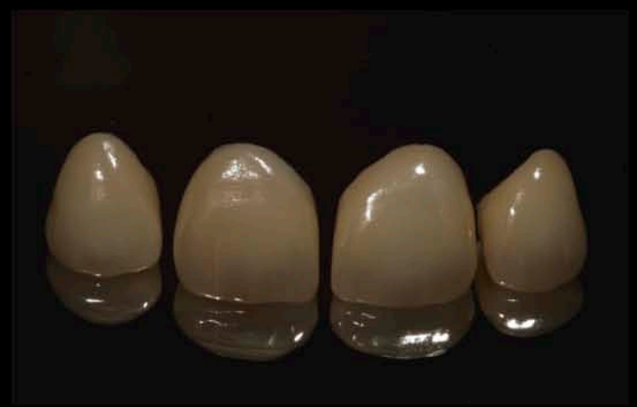


Anesthesia was administered and the field isolated using retractors. Using a sharp probe the desired level of the gingivae was mapped out and this portion of tissue removed. A small flap was raised without using any vertical relieving incisions and the bone removed to 3 mm below the new gingival height. Two 4.0 sutures were placed and a periodontal dressing applied. Patient was given post op instructions. Stitches removed 1 week later.

# Construction of Anterior Crowns

A healing period of 6 months was observed following the crown lengthening surgery to 12,11,21,22. As can be seen the gingival contours have been well improved and a good result has been achieved from the non vital whitening. A wax up was constructed as there was a large variation in the sizes of the existing teeth and we were planning to substantially change the shape of the teeth. The patient was asked to bring in pictures of teeth that she liked the shape of to guide us, however she said that she preferred to give us complete freedom to do what we felt best!

The teeth were prepared using a number of silicone matrices to ensure that the preparations were as conservative as possible whilst removing material in the right areas to allow the technician to develop the agreed anatomy. Preparations were supra gingival using the 2 cord technique to ensure that good marginal detail was captured. The use of supra gingival preps combined with excellent gingival health meant that there was little trauma to the gingival tissues. A top lab (vision dental) was used to construct E - Max crowns that were then cemented individually using variolink.