

# Global Clinical Case Contest 2021-2022

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Place

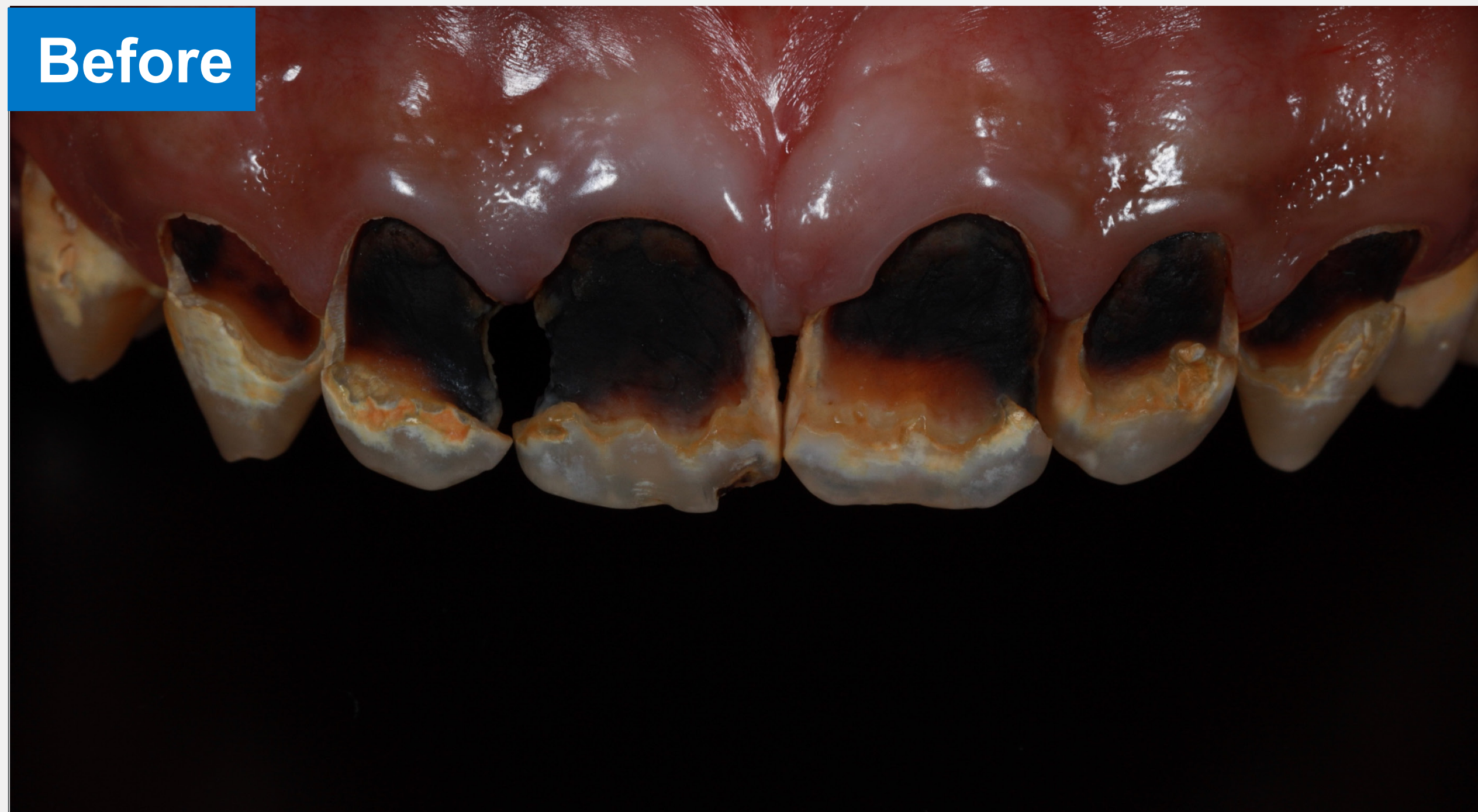


**Student:**  
Nanthiphorn Pongam  
**Tutor:**  
Munin Chaichalothorn  
**University:**  
Mahidol University  
**Country:**  
Thailand



## Introduction to the case

A 21-year-old male patient presented for treatments, complaining about poor aesthetics of his anterior teeth. After discussion with the patient and consideration with the treatment cost, the decision was made in favor of rehabilitation to his smile with direct resin composite veneers. This treatment option can be applied in minimally invasive way offering possibilities for further restorative options in a dynamic way.

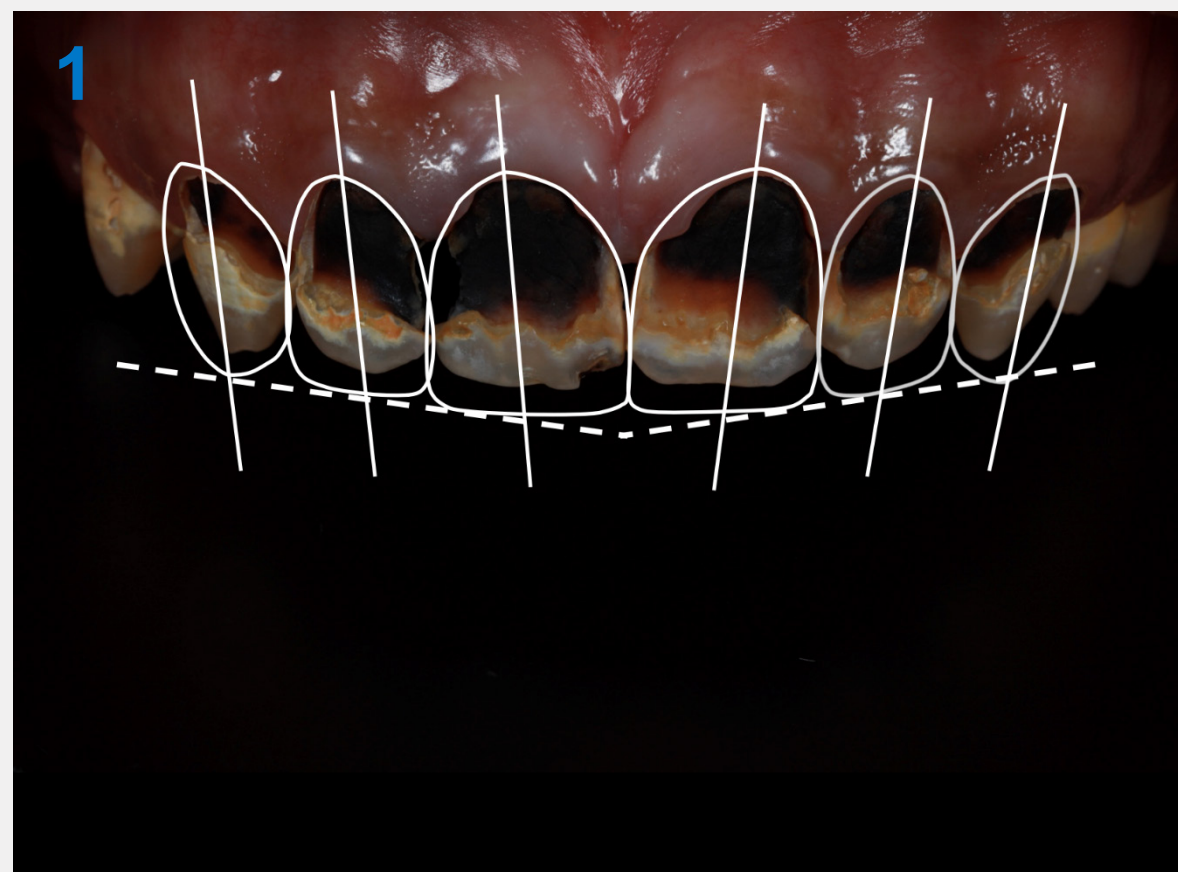


The pre-operative situation presented with severely carious lesions and enamel defect on upper anterior teeth.



Final result not only provides natural aesthetics but also restores effective function. The patient is highly satisfied with his new smile and the overall result.

## Treatment steps



**Step 1 Digital analysis and smile design**

According to the digital smile design (DSD), esthetic criteria was evaluated especially in tooth shape and width to height ratio. Then, the diagnostic models were fabricated followed the design from DSD.



**Step 2 Wax-up and a silicone key on teeth 13-23**

The diagnostic wax-up was performed and a silicone index was fabricated using a putty additional silicone material.



**Step 3 Shade selection**

After cleaning, proper shades were selected by using VITA® shade guide paired with universal CLOUD shades. The enamel shade (E1) and dentine shade (D1) were determined.



**Step 4 Caries removal and cavity preparation**

A rubber dam isolation and gingival retraction cords were applied. After that, caries was selectively removed for preserving a vital pulp tissue. Minimally invasive preparations were performed on teeth 13-23.



**Step 5 Bonding procedures**

The cavities were selectively etched with 36% phosphoric acid, then rinsed with water spray and air-dried. Adhesive procedures were performed with a universal adhesive (**Prime&bond Universal™**) according to the manufacturer instruction.



**Step 6 Palatal wall and proximal wall build up**

The **Neo Spectra™ ST Effects composites** (shade E1) was placed to build up the palatal wall and proximal wall by using a silicone index and a mylar strip respectively. Then, the dentin shade (D1) was used to create a dentine lobes.



**Step 7 Finishing and Polishing**

Morphological characteristics were marked to specify the line angle and developmental groove. Then, **Enhance® Finishing System** and **Enhance® PoGo® Polishing System** were used to mimic natural microtexture and glossy surface.



**Step 8 An immediate result with smile**

The upper anterior teeth revealed natural smile line which co-ordinated with the lower lip line.

## Material and Method

After smile analysis, the direct composite veneers were determined as the treatment of choice. Then, minimally invasive preparations and selective caries removal were performed. The cavities were selectively etched with 36% phosphoric acid and bonded with a universal adhesive (**Prime & bond™ universal**). The palatal wall build up was done using the silicone index. The **Neo spectra™ ST effects composite** (E1 and D1) was applied to create aesthetic results and restore effective function by "Layering technique". Shaping and polishing were achieved with fine diamond burs, abrasive discs, **Enhance® Finishing System** and **Enhance® PoGo® Polishing System**.

## Discussion and Conclusion

The smile transformation was a challenging task in the present case because of the severely carious lesions. Therefore, the direct composite restorations with minimally invasive concept were a preferable option for providing the patient with the maximum possibility of reintervention in the future. The modern composite material has the advantages of combining reasonable cost and proven longevity. Especially, the **Neo spectra™ ST effects composite** with a **sphereTEC® technology** provides precise shade matching and can be easily used in a simplify layering technique. Moreover, this material allows the restorations to create identically natural teeth not only aesthetic results but also functional aspects.



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