

Dental Materials in Clinic

Guan

- Invisalign aligner
- Implant
- Cerec crown
- Composite resin
- Impression
- Whitening kit
- Instant glue

Invisalign Aligner



- Polyurethane 聚氨酯
 - Thermoplastic, multilayer
- Specific characteristics
 - FDA approved for medical use
 - Free of BPA, latex, gluten
 - Good elasticity
 - Resilience and resistance to saliva

Ti Implant

- Chemically stable
 - Titanium pure/alloy 纯钛/钛合金
 - Stable, non-rust
- Biologically compatible 生物相容
 - Osseointegration 骨性结合
- Mechanically strong



Cerec Crown



- Lithium disilicate glass-ceramic (Ivoclar Vivadent)
 - 硅酸锂玻璃陶瓷
- Zirconia ceramic (Dentsply Sirona)
 - 氧化锆陶瓷
- High-performance and high flexural strength
- Biocompatible

Composite Resin

- Composite resin 复合树脂
 - Methacrylate monomer 甲基丙烯酸树脂单体
 - Silica/quartz filler 二氧化硅/石英填料
 - Photo sensitizer 光敏剂
 - Pigment 颜料
- High-performance and high strength
- Flowable resin: less filler



Impression materials

- Alginate 藻酸盐
 - Derived from sea weed
 - Water-based
 - Make model soon
- Polysiloxane 聚硅氧烷（硅橡胶）
 - Synthetic polymer
 - Chemically stable



Whitening Kit

- Whitening Agent
 - Hydrogen (HP) or carbamide peroxide (CP) 过氧化氢（脲）
 - In-office 15%-48% HP
 - At-home 3% to 20% CP
- Desensitizer
 - 6 % ACP
(Amorphous Calcium Phosphate)
 - 无定型磷酸钙



Instant glue

- Cyanoacrylate monomer
 - α -氰基丙烯酸酯
- Polymerize under catalysis of trace water
 - 微量水催化聚合

