



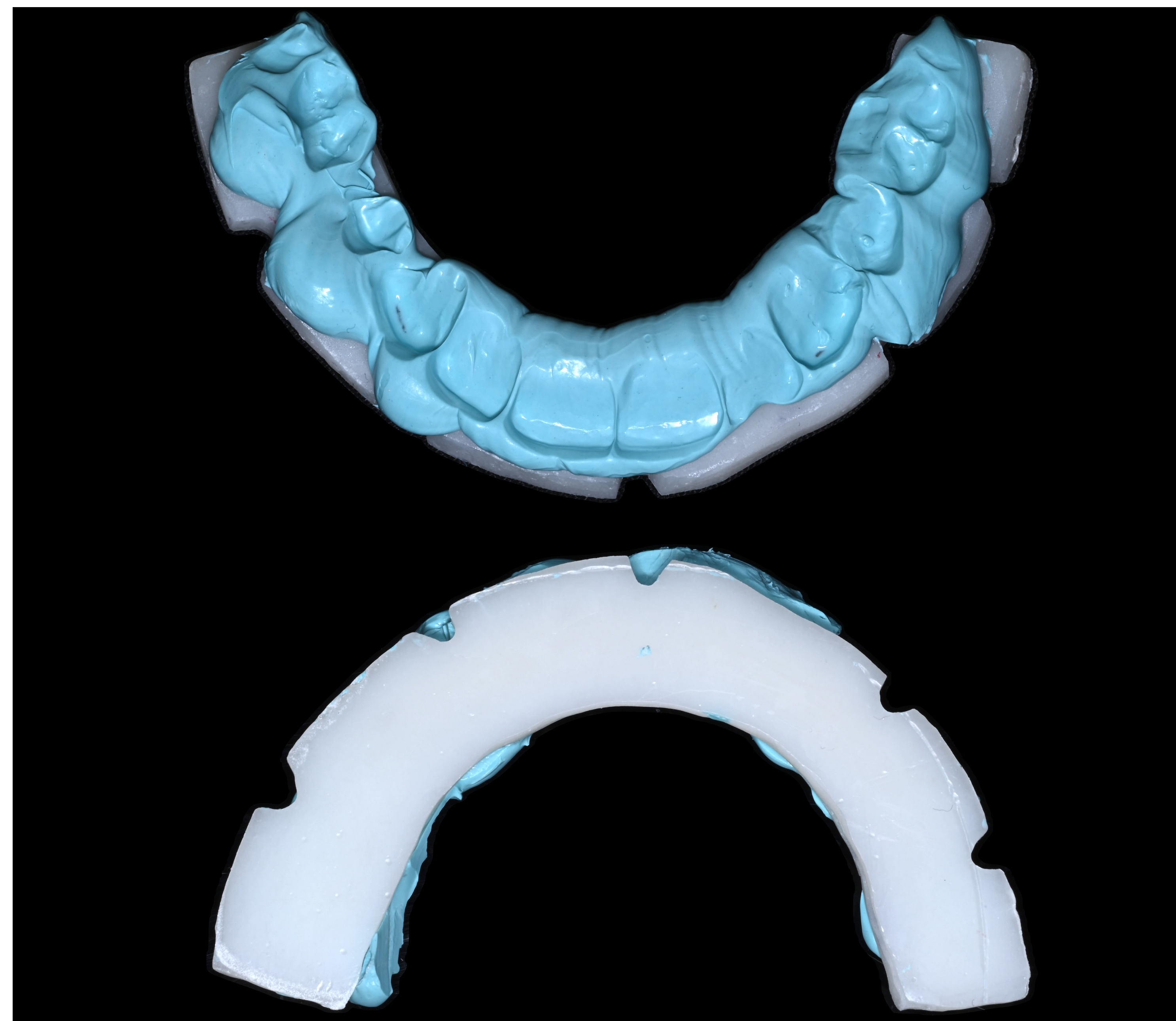
A Radiopaque Stent Technique for Accurate Alignment of Intraoral Scans and CBCT in the Presence of Metallic Artifacts

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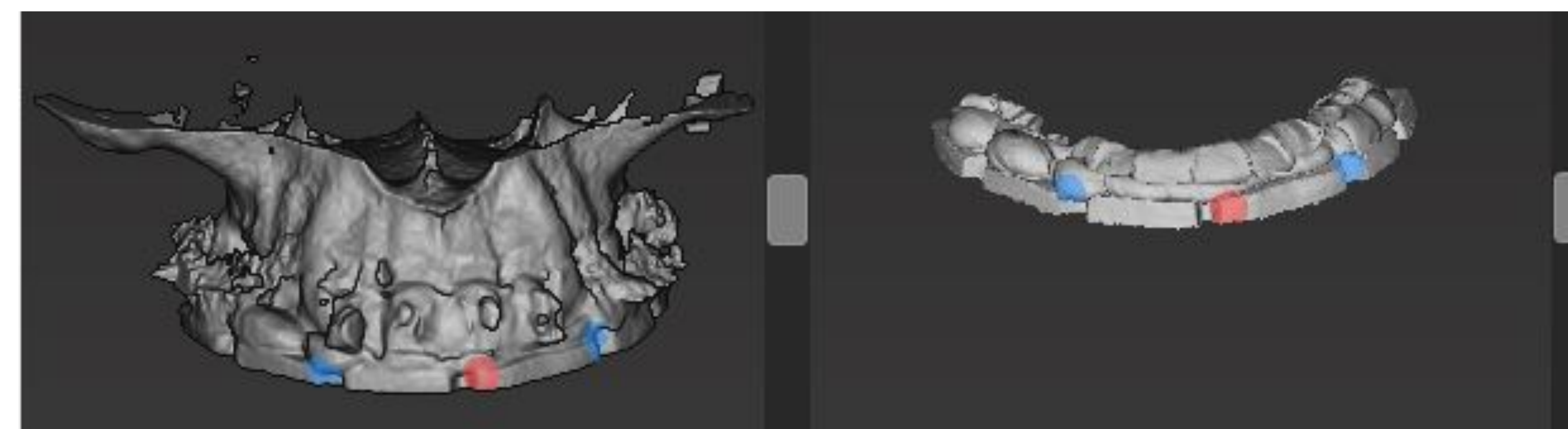
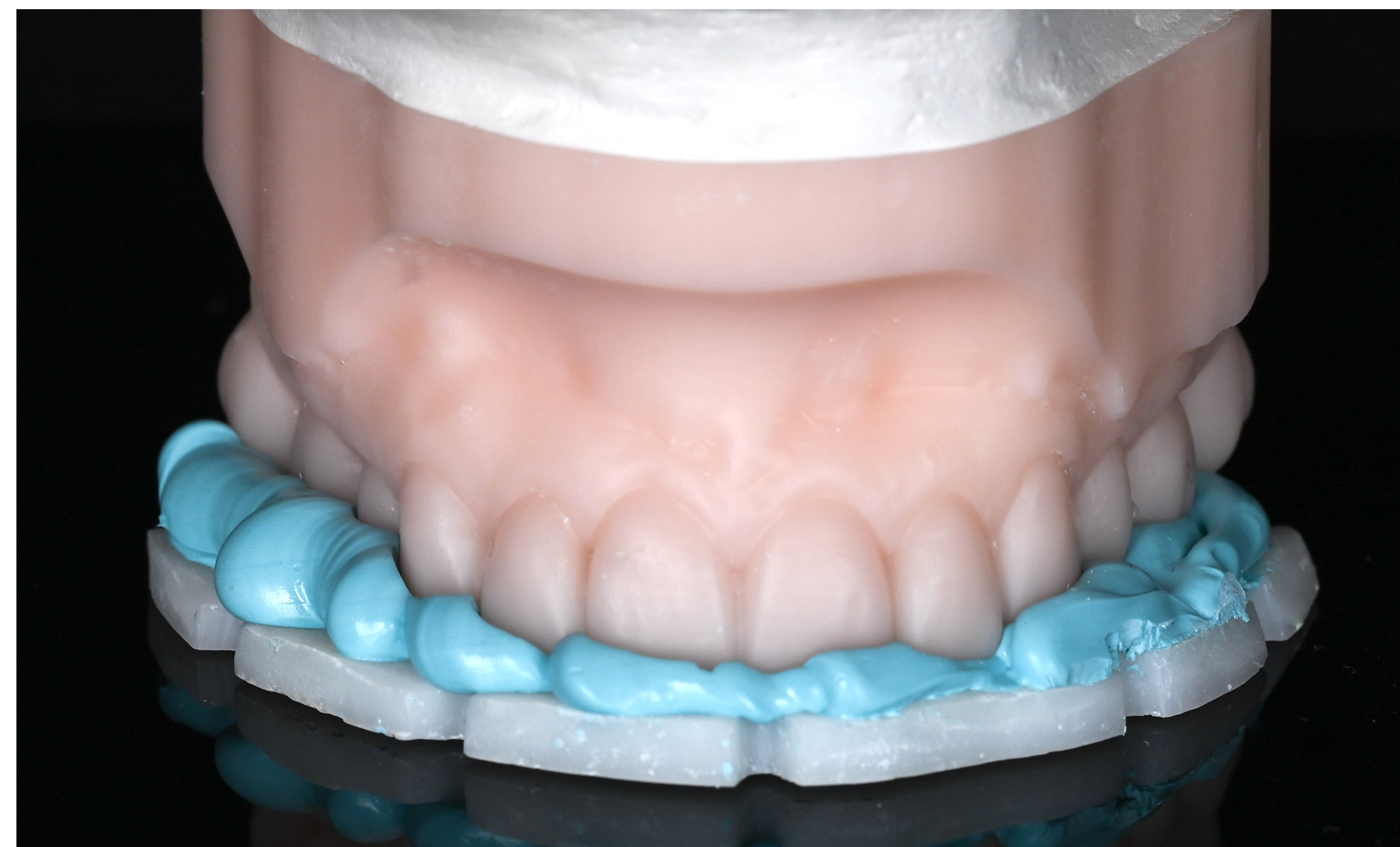
Objective

- To address the challenge of inaccurate alignment between digital intraoral scans and CBCT images in implant planning caused by metallic artifacts from existing restorations.
- To present a technique that improves accuracy and efficiency in aligning intraoral scans and CBCT images eliminating the need for specialized radiographic templates, devices or markers, providing clinical efficiency and reliability in cases involving metallic artifacts, offering a practical solution for improved implant planning accuracy.



Methods

- Radiographic stent fabricated from radiopaque acrylic with occlusal registration material
- Stent placed intraorally during CBCT acquisition
- Digital intraoral scans captured
- Extraoral scan of stent performed
- Stent and occlusal surfaces used as reference points
- Alignment of intraoral scans with CBCT achieved through these references



Conclusion

This technique provides a simple, cost-effective, and clinically applicable solution for aligning digital intraoral scans with CBCT images in cases complicated by metallic restorations during prosthetically driven implant planning. It can be incorporated into existing digital protocols.

