

Aim

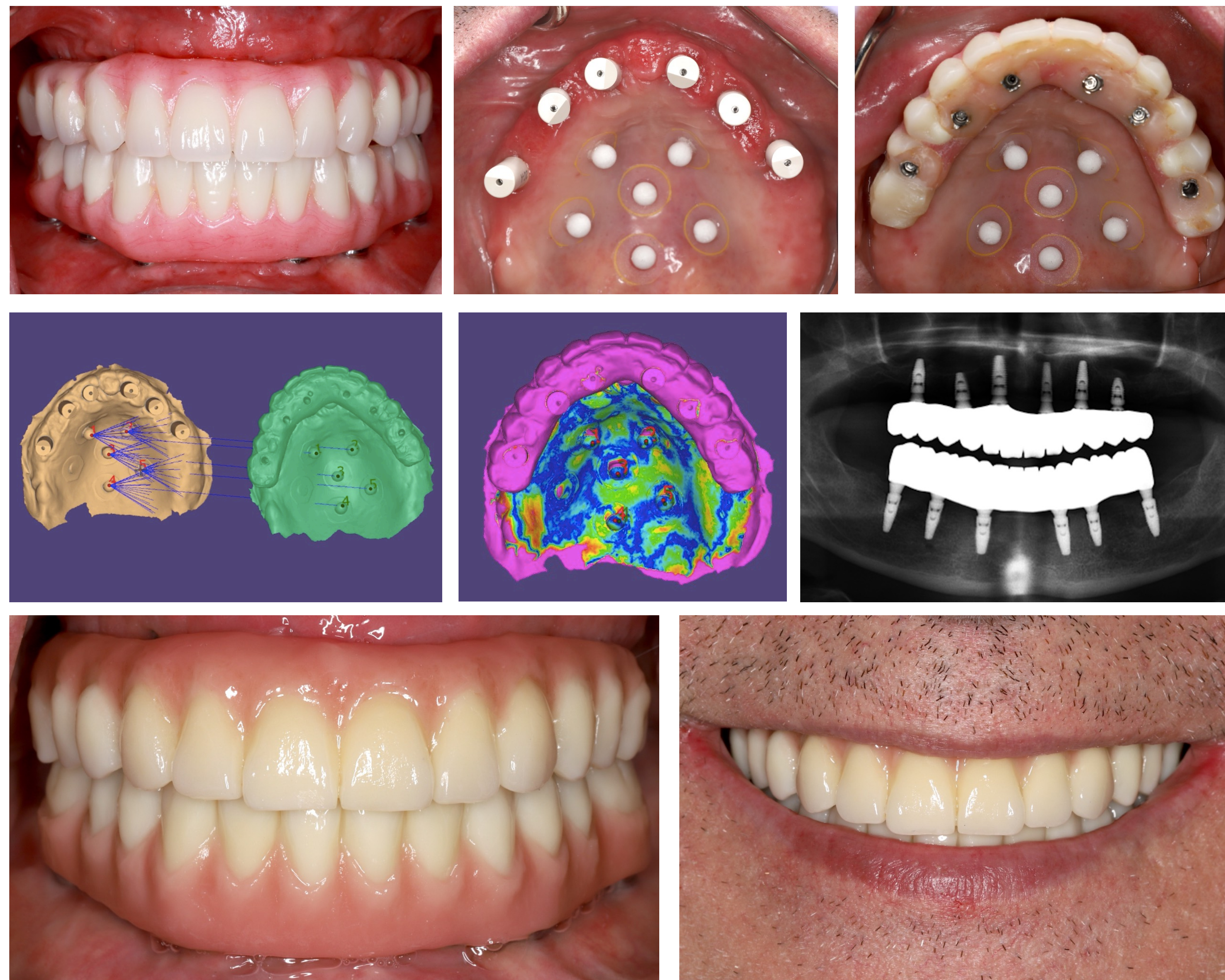
To report early outcomes of a protocol for complete digital workflow in full-arch implant rehabilitation with zirconia prostheses.

Materials and methods

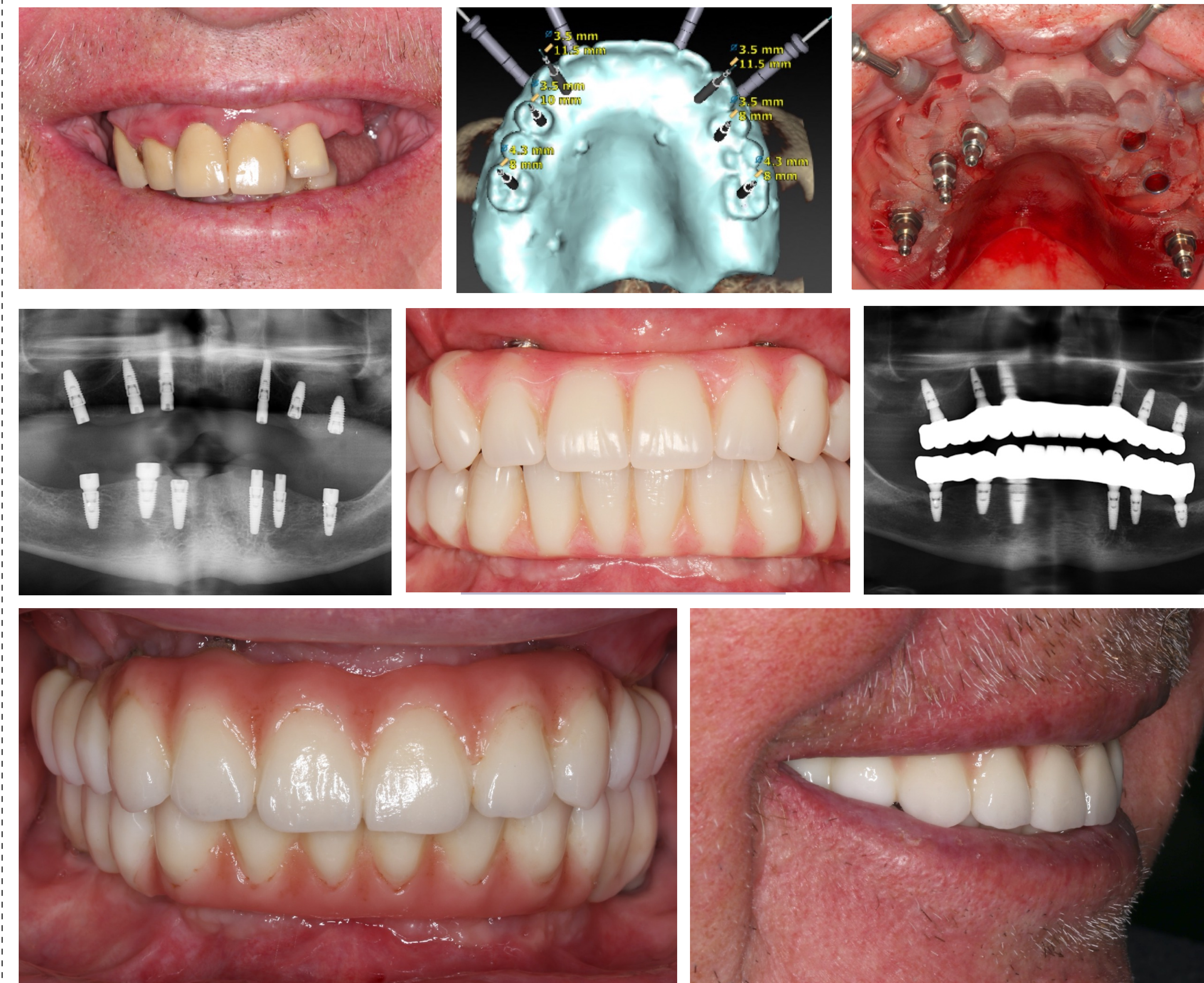
Three patients underwent full-mouth fixed implant rehabilitation with double full-arch, one-piece, minimally veneered monolithic zirconia prostheses at the multi-unit abutment level. A digital workflow was applied throughout all aspects of the treatment, from digital planning and template-guided implant placement to digital impressions and CAD/CAM prosthodontics.

After implant healing, double intraoral scans with the interim prostheses were taken, as well as scans with the scanbodies. Both STLs were superimposed using adhesive markers in the palate as reference using the **Double Digital Scanning (DDS) technique**, allowing for digitally-designed PMMA prototypes fabrication, and subsequent final zirconia prostheses. Clinical and radiographic outcomes are reported after up to 2-years of follow-up.

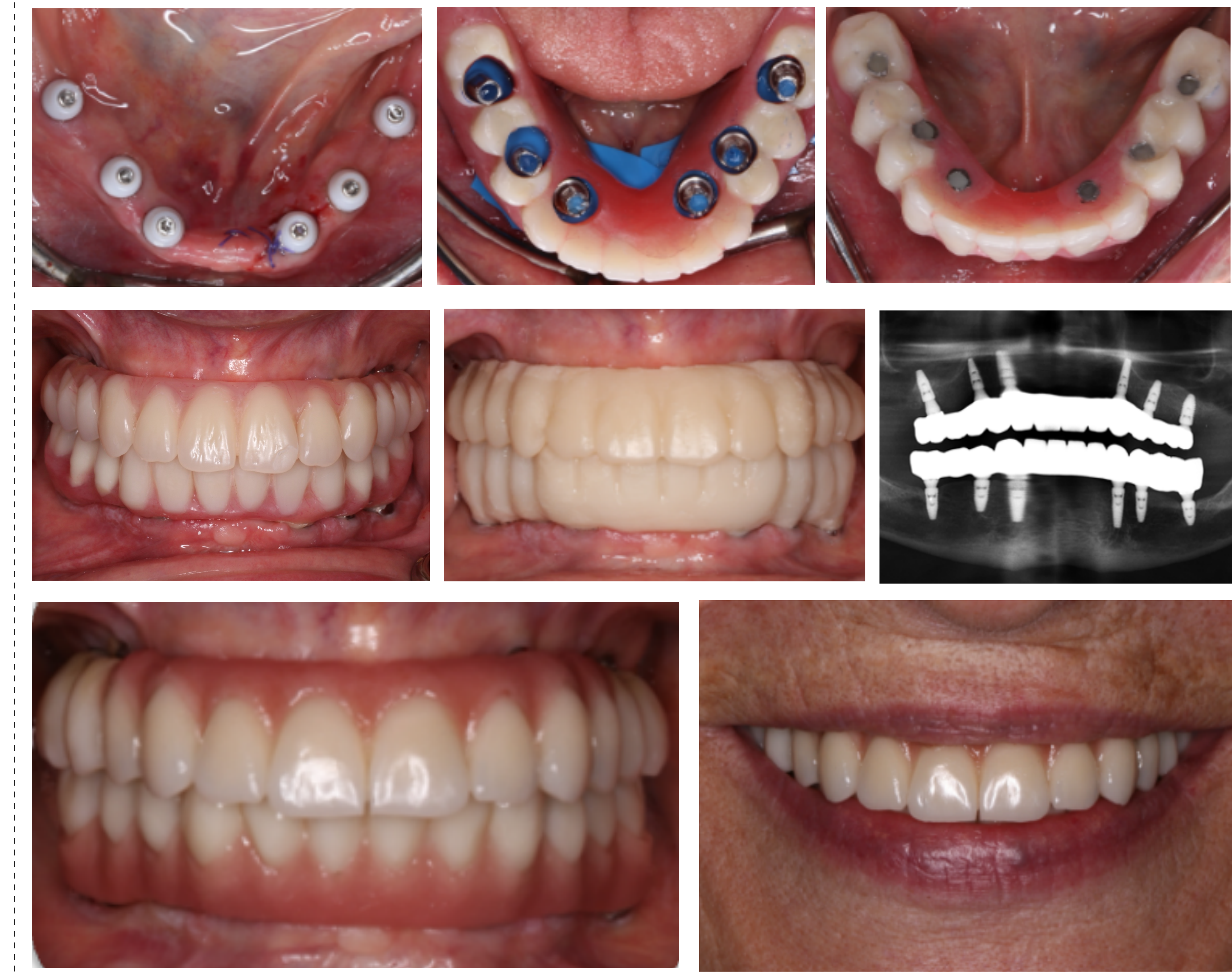
Case 1



Case 2



Case 3



Results

After short-term 2-year observation time, implant and prosthesis survival rates were 100%. Minor biologic complications such as peri-implant soft tissue recession was observed in all patients, while no technical complications were encountered. A digital workflow for double full-arch fixed implant rehabilitation in 4 appointments was implemented.

Conclusion

Digital workflow can simplify the full-mouth implant rehabilitation with monolithic zirconia prostheses and predictably reduce chairside time and clinical appointments. The integration of digital planning, intraoral scanners and CAD/CAM technology has been key to the enhancement of clinical effectiveness. The use of monolithic zirconia as the prosthetic material for double full-arch fixed implant rehabilitation seems promising in the reduction of treatment visits as well as the most frequent technical complication of porcelain chipping/fracture.