CLINICAL CASEBOOK ON IMMEDIATE IMPLANTS.

BioHorizons Camlog's Implant Systems.

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biohorizons camlog group

INTRODUCTION.

Dr. Homa Zadeh
DDS, PhD
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DEAR READERS.

It is a privilege to introduce the Immediacy Implant Casebook, a collection that reflects both the technical excellence and the collaborative spirit that define contemporary implant dentistry. The cases presented here capture a pivotal moment in our profession — one in which innovation, digital technology, and biological understanding converge to expand what is possible for our patients.

The principle of immediacy in implantology is more than a procedural choice; it represents a commitment to providing prompt, functional, and aesthetic solutions without compromising biological integrity. This approach demands precision, sound clinical judgment, and mastery of emerging tools—from advanced implant designs and biomaterials to guided surgical protocols, photogrammetry, and AI-enhanced planning. As this casebook demonstrates, immediacy can be applied successfully across a broad spectrum of clinical scenarios, from single-tooth replacement in the aesthetic zone to full-arch rehabilitations, even in challenging situations with compromised hard or soft tissues.

Each case in this volume offers more than a step-by-step record of treatment. It provides insight into the decision-making process, highlights critical technical nuances, and illustrates the profound impact of interdisciplinary collaboration. Together, these contributions underscore a shared philosophy: that patient-centered care, supported by evidence-based protocols and technological innovation, can deliver predictable outcomes with remarkable efficiency.

I encourage readers to engage with these cases not only as a source of practical guidance but also as a catalyst for reflection and professional growth. The diversity of techniques and workflows presented here demonstrates that while there are many paths to success, they all rest upon the same foundation — thorough planning, precise execution, and a deep respect for the biology we are entrusted to preserve.

May this casebook inspire you to refine your skills, explore new possibilities, and continue raising the standard of care for every patient you serve.

Enjoy,

Homa H. Zadeh, DDS, PhD
VISTA Institute for Therapeutic Innovations

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IMMEDIATE IMPLANT PLACEMENT (IIP) WITH PROVISIONALISATION USING THE NATURAL CROWN.

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Dr. Alex Fneiche
AD Dental Clinic,
Trazegnies,
Belgium

TREATMENT TIME
7 months

TOOTH NUMBERS
21

TREATMENT TYPE
Immediate Implant Placement (IIP) in the Anterior zone using a CONELOG® PROGRESSIVE-LINE implant with temporisation and on-lay grafting.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® XP**

INITIAL PRESENTATION
A 38-year-old female physician in perfect health presented following a root fracture of tooth 21. Due to her demanding professional schedule, she requested a fast, simple, and aesthetic solution, ideally minimising the number of visits. Notably, the patient had previous experience with immediate implant treatments, having undergone an extraction and implant restoration of tooth 22 a few years earlier.
Clinically, tooth 21 exhibited a root fracture that could not be preserved. Disharmonious tooth alignment, inconsistent gingival levels between adjacent teeth, and a thin, soft tissue biotype compromised the anterior aesthetics. Particular attention was needed to manage the papilla between teeth 21 and 22 and harmonise the emergence profiles across the smile.

TREATMENT PLANNING AND DIAGNOSIS
Given the complexity of the case and the patient's aesthetic expectations, a CBCT was performed to guide planning. A silicone positioner was fabricated preoperatively to ensure accurate repositioning of the patient's extracted tooth onto a temporary abutment.
In September 2024, tooth 21 was atraumatically extracted. Immediate implant placement was performed, using a 3.8 x 11 mm CONELOG® PROGRESSIVE-LINE implant with a temporary cylinder. The natural crown was recycled and adapted onto the temporary abutment as the immediate provisional.
Although the initial surgery was successful and the patient left satisfied, the aesthetic result at the three-month review was disappointing (Fig. 2). The gingival margins were uneven, the soft tissue contours around the central incisors were inconsistent, and the proportions of teeth 11 and 21 were not harmonious. The need for comprehensive soft tissue management had been underestimated initially.

THE SURGERY AND INITIAL OUTCOMES
The first surgical phase involved atraumatic extraction and immediate implant placement with provisionalisation. Healing proceeded without complication; the patient strictly adhered to post-operative instructions. At three months, however, dissatisfaction with the aesthetic outcome led to a decision to resume treatment. Impressions were taken for implants 21 and 22 and two new provisional crowns were fabricated to optimise the emergence profiles (Fig. 3). A diagnostic wax-up was also completed for teeth 11 and 12 to guide smile design improvements (Fig. 4). A buried connective tissue graft (CTG) was harvested from the tuberosity and sutured into position using Ethilon 6-0 sutures to increase soft tissue thickness and volume (Fig. 5).

MAIN CLINICAL OUTCOMES

One-month post-CTG, the improvement in soft tissue contour and symmetry was significant (Figs 6a, 6b, 7). Preparations were completed for teeth 11 and 21, and impressions of the definitive crowns on implants were taken (Fig. 8). Restoration of tooth 12 with a crown and veneer placement on tooth 11 further enhanced the final aesthetics.

The final result exceeded expectations, delivering a balanced, natural and harmonious smile (Figs. 9a–9b).

BENEFITS OF CHOSEN SOLUTIONS

The CONELOG® PROGRESSIVE-LINE implant, in conjunction with MinerOss® XP and a matching connection temporary abutment, provides a comprehensive and advantageous solution for dental implant procedures.

This case highlighted the critical importance of meticulous soft tissue management and careful planning to achieve high-level aesthetic outcomes. The CONELOG® PROGRESSIVE-LINE implant provided excellent primary stability and a predictable restorative platform. Recycling the natural crown offered immediate aesthetics, while MinerOss® XP grafting and the buried CTG enhanced the gingival architecture and long-term soft tissue stability.

The CONELOG® PROGRESSIVE-LINE implant progressive thread design, characterised by its conical shape, optimises primary stability, particularly vital for immediate or early loading. It's specialised surface treatment, significantly enhances osseointegration by promoting faster and more robust bone-to-implant contact, reducing healing time and improving long-term implant stability. The CONELOG® connection, known for its precision, minimises micromovement and stress distribution, reducing the risk of screw loosening and implant failure. This connection also ensures a tight seal, preventing bacterial infiltration.

MinerOss® XP, is a reliable bone grafting material that effectively supports bone regeneration and augments the implant's foundation. The use of a temporary abutment with the same connection as the final restoration streamlines the restorative process, simplifies soft tissue management, and contributes to predictable aesthetic outcomes. This integrated system maximises stability, osseointegration, and restorative predictability, leading to improved patient satisfaction and long-term implant success.

CONCLUSION

A key learning point from this case was the reminder that successful implant therapy in the aesthetic zone extends beyond implant placement alone. Proper attention to soft tissue volume and emergence profile is vital. Investing more time in the initial planning phase would have streamlined the treatment and saved valuable time overall.

The patient's satisfaction was exceptional. Previously self-conscious about her smile, she appeared more confident, smiling and speaking freely without hesitation. This transformation was immediately noticeable, even in the waiting room.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT (IIP) WITH PROVISIONALISATION USING THE NATURAL CROWN.

Fig. 1: Initial clinical presentation showing fractured tooth 21

Fig. 2: Outcome three months after immediate implant placement — aesthetic shortcomings visible

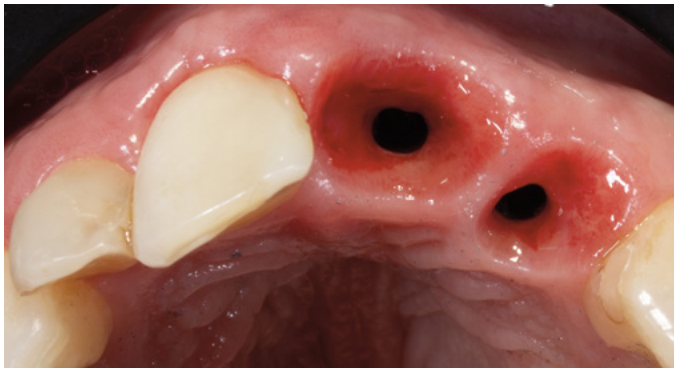

Fig. 3: Emergence profile three months after the first surgery, we see that it would be necessary to thicken the tissues around the implant 21

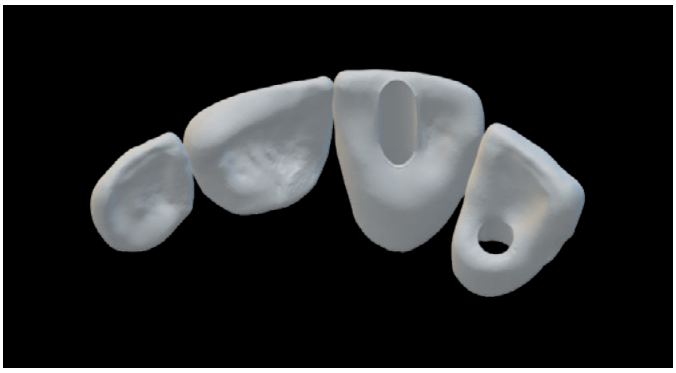

Fig. 4: Diagnostic wax-up for teeth 11 and 12 to enhance smile harmony

Fig. 5: Immediate outcome after CTG surgery and new provisionals crowns and mockup

Fig. 6a: Soft tissue healing at one month post-CTG

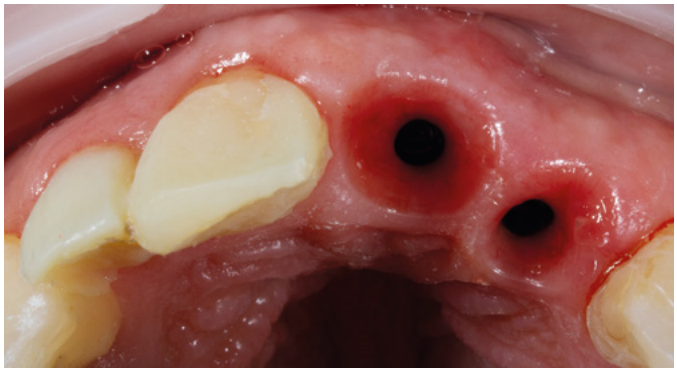

Fig. 6b: Occlusal view of improved emergence profiles at one month post-CTG

Fig. 7a: Frontal view of soft tissue maturation one month after CTG

Fig. 7b: Close-up of new papilla formation and contour around implants 21 and 22

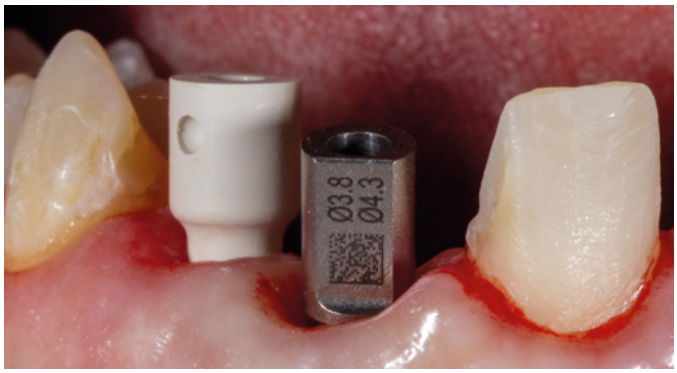

Fig. 8: Impression phase for definitive restorations of teeth 11 and 21

Fig. 9a: Final clinical result showing balanced, aesthetic anterior smile

Fig. 9b: Close-up of final restorations demonstrating natural symmetry and soft tissue harmony

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT PLACEMENT WITH SOFT TISSUE ENHANCEMENT USING A DIGITAL WORKFLOW IN THE AESTHETIC ZONE.

A failing upper central incisor was managed using immediate implant placement with MinerOss® X and free gingival grafting. Through a digitally guided workflow, excellent aesthetic and functional results were achieved.

Dr. Martijn Moolenaar
Dental Design Center Moolenaar,
Blaricum,
Netherlands

TREATMENT TIME
6 months

TOOTH NUMBERS
21

TREATMENT TYPE
Immediate implant placement with soft tissue grafting, socket grafting, customised provisional and final restoration.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® X**

CLINICAL HIGHLIGHTS
- Immediate implant placement using a CONELOG® PROGRESSIVE-LINE implant in the upper central incisor with soft tissue augmentation
- Virtual planning with 3Shape and facial scanning to optimise final tooth position
- Socket grafting using MinerOss® X and free gingival grafting to support tissue contours
- Successful provisionalisation followed by final screw-retained lithium disilicate crown

INITIAL PRESENTATION
A patient was referred with a failing upper left central incisor (tooth 21), exhibiting cervical root resorption and mild gingival inflammation. The patient had a high smile line and thin midfacial soft tissue architecture that was not harmonious with the adjacent teeth. Given the aesthetic demands, digital planning and tissue management were crucial in this case.

TREATMENT PLANNING AND DIAGNOSIS
During the initial consultation, it was noticed that the midfacial soft tissue level of the failing tooth 21 was not in harmony with the adjacent teeth. A face scan, intraoral scan (IOS), and CBCT were taken to address the soft tissue asymmetry and aesthetic challenges. These scans would help plan the implant position so that after healing and maturation the soft tissue position would be enhanced. The new anatomical dimensions for tooth 21 were digitally designed using 3Shape software, optimising its position in relation to the facial profile. This position was then used to guide the implant placement and the design of a guided surgical template.

THE SURGERY AND INITIAL OUTCOMES
Tooth 21 was extracted, and a 4.3 x 11 mm CONELOG® PROGRESSIVE-LINE implant was placed immediately using the guide. The socket gap was grafted with MinerOss® X, which was selected for its non-resorbable nature to maintain volume long-term.
A connective tissue graft was harvested from the palate, specifically from the first premolar region to the first molar area and placed buccally at the 21 in a supracrestal pouch. This technique required careful dissection of the palate to avoid apical blood vessels and meticulous suturing with a polypropelene 6.0 to ensure full closure.
A PMMA provisional restoration, milled to match the new anatomy of tooth 21, was bonded to adjacent teeth using two wings. After initial healing at two weeks, sutures were removed. At eight weeks, the provisional crown was connected to a temporary metal abutment and kept completely out of occlusion to protect the implant during the healing phase. The soft tissues surrounding the implant were then shaped to create an optimal surrounding for the ceramic restoration.

MAIN CLINICAL OUTCOMES

Five months post-surgery, intraoral scanning was used to capture the mature soft tissue contours and implant position. A screw-retained lithium disilicate crown was fabricated in the laboratory and connected to the implant 3 weeks later.

The treatment objective to level the soft tissues in a more aesthetically pleasing way was successfully achieved. The result showed successful implant osseointegration, excellent aesthetic integration with adjacent teeth from the ceramic crown and highly stable peri-implant soft tissues. Postoperative care included using BlueM oral rinse and gel starting 48 hours after surgery for two weeks to promote healing. The patient reported high satisfaction with the outcome, and soft tissue contours remained stable throughout follow-up.

BENEFITS OF CHOSEN SOLUTIONS

- **3Shape digital planning** allowed for precise implant and crown design to correct tissue asymmetry.
- **MinerOss® X** provided stable volumetric graft support due to its slow resorption profile.
- The **connective tissue graft** significantly improved soft tissue thickness and contour in the aesthetic zone.
- The two-phase **provisional restoration strategy** enabled soft tissue shaping before final prosthesis delivery.
- **Screw-retained final restoration** ensured retrievability and long-term prosthetic stability.

CONCLUSION

This case demonstrates how immediate implant placement after extraction combined with digital planning, grafting, and soft tissue management can yield highly predictable and aesthetic outcomes in demanding anterior cases.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT WITH SOFT TISSUE ENHANCEMENT USING A DIGITAL WORKFLOW IN THE AESTHETIC ZONE.

Fig. 1: Initial situation

Fig. 2: X-ray initial situation

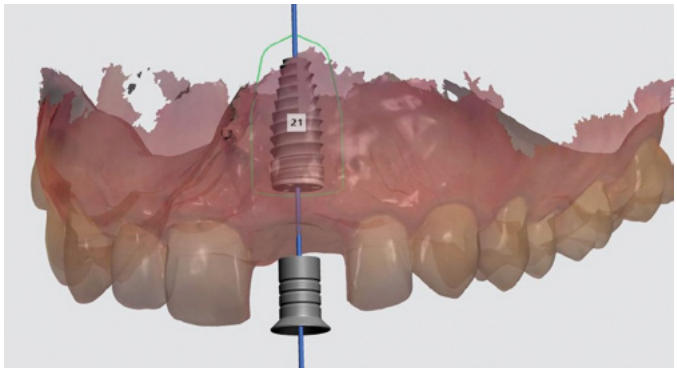

Fig. 3a: Implant planning

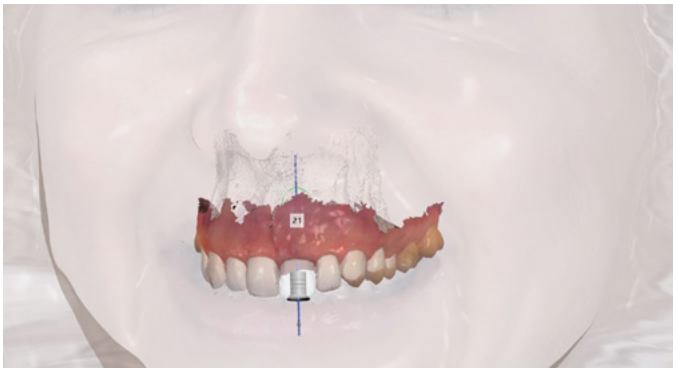

Fig. 3b: Implant planning with face scan

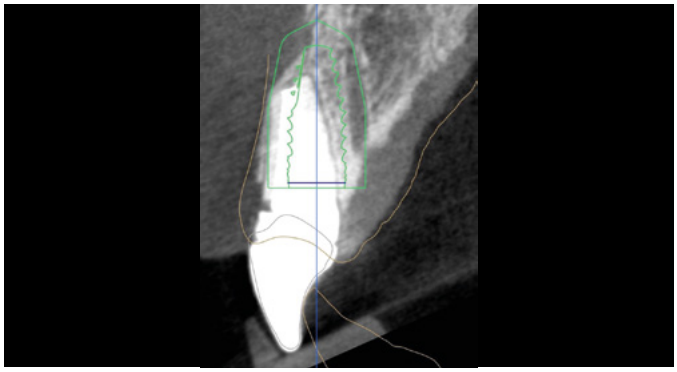

Fig. 3c: Implant planning with CBCT

Fig. 4: Initial situation on the day of surgery

Fig. 5: Implant placement and temporary restoration on the day of surgery

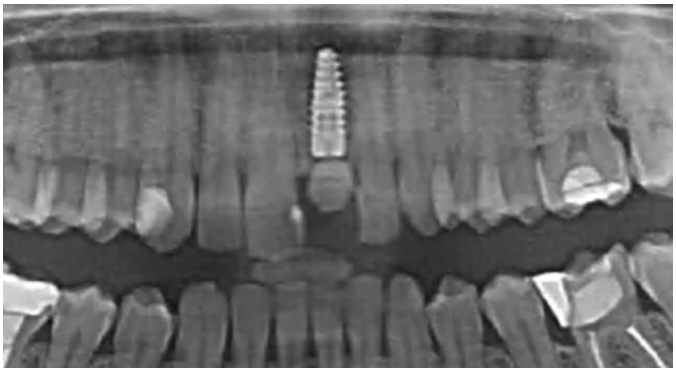

Fig. 6: X-ray implant placement

Fig. 7: Connection temporary crown to implant

Fig. 8: X-ray connection temporary crown to implant

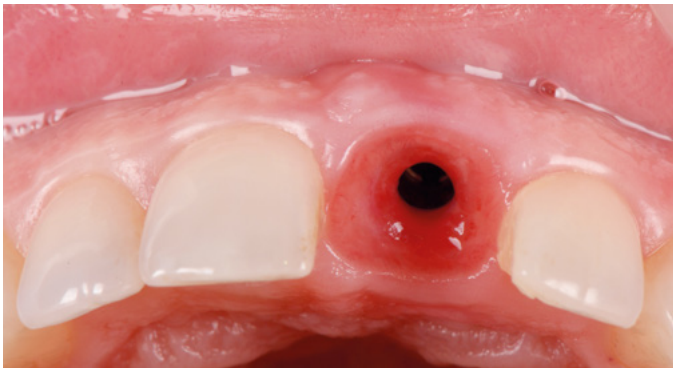

Fig. 9: Final soft tissue contour

Fig. 10: IOS scanbody

Fig. 11: Final result with ceramic restoration

Fig. 12: X-ray final result

IMMEDIATE IMPLANT PLACEMENT AND TEMPORISATION IN THE POSTERIOR MAXILLA USING CONELOG® PROGRESSIVE-LINE IMPLANTS.

A 61-year-old male with failing posterior teeth in the upper left maxilla was treated using flapless immediate implant placement with a CONELOG® PROGRESSIVE-LINE implant. MinerOss® XP and BioPlug supported ridge preservation, while PIC photogrammetry enabled efficient and precise temporisation and restoration.

Dr. Frank Leusink
Kaakmeesterz,
Hengelo,
Netherlands

TREATMENT TIME
5 months

TOOTH NUMBERS
23, 24, 25, 26

TREATMENT TYPE
Immediate implant placement with CONELOG® PROGRESSIVE-LINE bone-level implants and immediate restoration using CONELOG® Multi-unit abutments for trans-gingival healing in posterior sites. Grafting with MinerOss® XP and autologous bone. Socket sealing with BioPlug.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implants**
- **CONELOG® Multi-unit abutments**
- **MinerOss® XP**
- **BioPlug PDM**

INITIAL PRESENTATION
The patient, a 61-year-old male, presented with failing restorations in the left maxilla, teeth 23, 25, and 26. The clinical examination revealed deep caries, a fractured premolar, and a molar with a failing endodontic treatment and an overextended crown. The lateral view (Fig. 1) highlights the compromised restorations and soft tissue recession, while the occlusal view (Fig. 2) reveals plaque-retaining prosthetic margins and uneven occlusal architecture. Although oral hygiene was suboptimal, no pockets deeper than 3mm were probed.
Teeth 23, 25, and 26 were deemed unsalvageable. Due to the workload and existing commitments, the patient accepted the removal of the teeth but demanded a quick rehabilitation with an immediate temporary bridge.

TREATMENT PLANNING AND DIAGNOSIS
Following panoramic imaging (Fig. 3), a CBCT scan was obtained to assess the alveolar process. Virtual implant planning confirmed the availability of sufficient native bone to support immediate placement of three CONELOG® PROGRESSIVE-LINE implants in regions 23, 25, and 26. Cross-sectional images (Figs. 4a–4c) illustrate the final planned positions, optimised for screw-retained restoration and soft tissue management.
The plan called for flapless extractions, immediate freehand implant placement, and socket preservation using a combination of MinerOss® XP and autologous bone. BioHorizons BioPlug PDM would be placed to seal the grafted sites. Multi-unit abutments were to be torqued at surgery to allow for immediate digital impression-taking using PIC photogrammetry in combination with a 3Shape Trios 5 intraoral scanner. A screw-retained PMMA provisional would be delivered within 48 hours of implantation. At four months, a second intraoral scan would guide the fabrication of the final monolithic zirconia bridge.

THE SURGERY AND INITIAL OUTCOMES
Teeth 23, 25, and 26 were extracted atraumatically under local anaesthesia without flap elevation. Granulation tissue was removed from each socket before the osteotomies were prepared freehand, guided by the virtual plan. All three CONELOG® PROGRESSIVE-LINE implants achieved excellent primary stability, with ISQ values of 80, 78, and 76, respectively.
Multi-unit abutments were immediately placed and torqued to 20 Ncm. The peri-implant gaps were filled with a mixture of MinerOss® XP and autologous bone, and the sockets were sealed with BioHorizons collagen BioPlug PDM material. The surgical site viewed occlusally (Fig. 5), shows intact mucosa and precise soft tissue management. A single resorbable suture was used to stabilise the papilla between sites 25 and 26.
Photogrammetry scanflags were positioned onto the Multi-unit abutments (Fig. 6) and intraoral scanning was completed. The STL and PIC files were sent to the laboratory to fabricate a temporary PMMA bridge. Two days post implantation, the temporary bridge was immediately inserted onto the Multi-unit abutments with a passive fit. Lateral and occlusal views of the temporary restoration (Figs. 8 and 9) show ideal emergence profiles and soft tissue support.

MAIN CLINICAL OUTCOMES

At the four-month follow-up, the implants had osseointegrated with healthy, well-contoured peri-implant tissues and increased ISQ values. The lateral view (Fig. 10a) and occlusal follow-up (Fig. 10b) confirm tissue maturation and aesthetic integration. A second intraoral scan was taken to fabricate the final monolithic zirconia bridge.

The final restoration (Fig. 11) was inserted without the need for occlusal or interproximal adjustment, and the final radiograph (Fig. 12) shows stable crestal bone levels and precise abutment fit.

BENEFITS OF CHOSEN SOLUTIONS

The CONELOG® PROGRESSIVE-LINE implant system delivered predictable primary stability without the need for guided surgery. An excellent system for freehand immediacy cases in the maxilla posterior zone, its prosthetic interface enables easy connection of Multi-unit abutments, simplifying the restorative workflow.

MinerOss® XP mixed with autologous bone, proved its value as a slow, resorbable, demineralised porcine bone matrix, alongside BioPlug PDM to facilitate excellent socket sealing with extra attached gingiva and without requiring tension on the flap. The "extra" layer of attached gingiva protects the weakest link – the connection between the Multi-unit abutment and the implant itself.

The combination of PIC photogrammetry and intraoral scanning, enabled an efficient and precise workflow, resulting in an immediate temporary bridge and a passive-fitting bridge restoration delivered within 48 hours.

CONCLUSION

This case demonstrates that immediate implant placement in the posterior maxilla can be predictably achieved using CONELOG® PROGRESSIVE-LINE implants and BioHorizons Camlog biomaterials.

By combining PIC dental photogrammetry, intra-oral scanning, and a digital lab, clinicians can achieve passive-fitting bridges that are easy to fit and decrease micro-leakage at the implant-abutment or abutment-bridge connections, adding to the longevity of the implant.

Finally, with a carefully planned digital workflow, efficient execution, and attention to soft tissue preservation, clinicians can confidently deliver fast, aesthetically pleasing, and functional outcomes, even in complex, Multi-unit posterior cases that require immediate freehand implantation.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT AND TEMPORISATION IN THE POSTERIOR MAXILLA USING CONELOG® PROGRESSIVE-LINE IMPLANTS.

Fig. 1: Preoperative left lateral view showing failing restorations and gingival recession

Fig. 2: Preoperative occlusal view of posterior maxilla

Fig. 3: Panoramic radiograph showing structural failure of teeth 23, 25 and 26

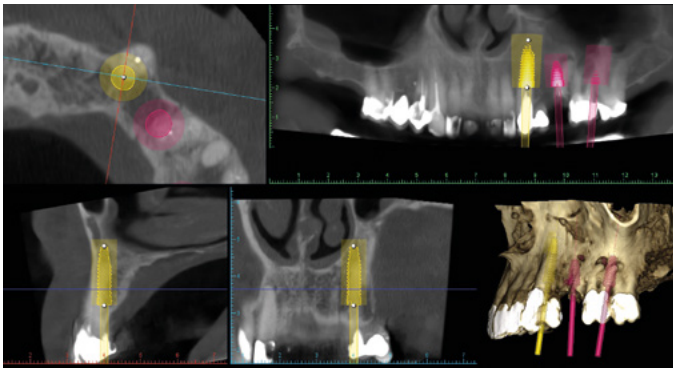

Fig. 4a: Virtual plan for implant placement in site 23

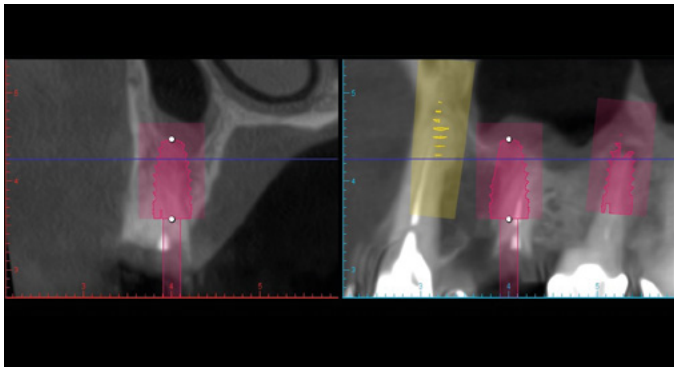

Fig. 4b: Virtual plan for implant placement in site 25

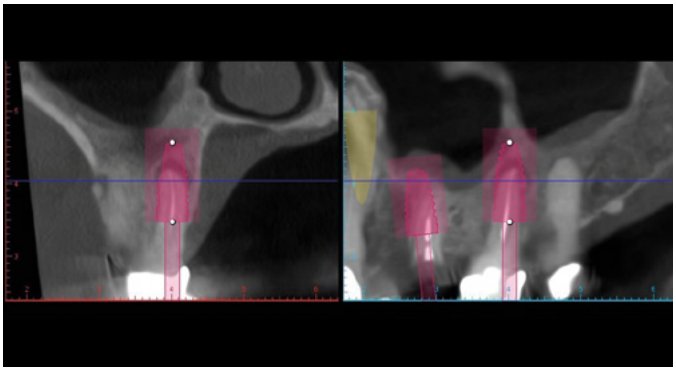

Fig. 4c: Virtual plan for implant placement in site 26

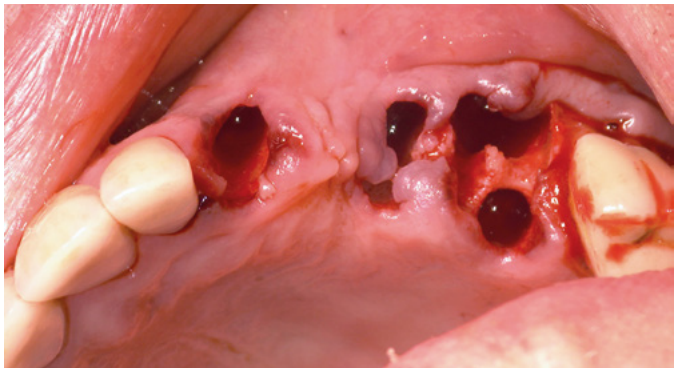

Fig. 5: Post-extraction occlusal view showing implant sites filled and sealed with BioPlug PDM

Fig. 6: PIC scanflags in position for photogrammetry

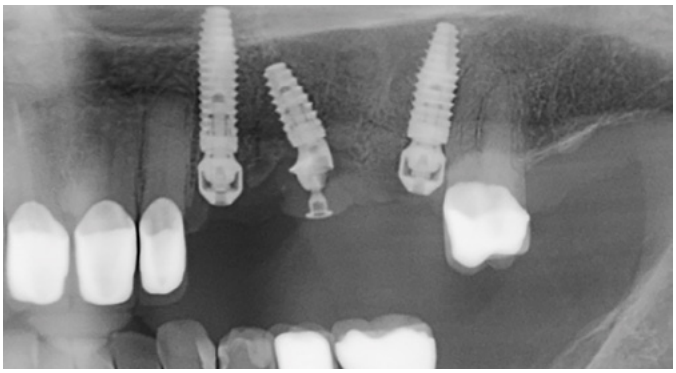

Fig. 7: Immediate post-op radiograph confirming implant and abutment seating

Fig. 8: Lateral view of PMMA temporary bridge two days post-op

Fig. 9: Occlusal view of provisional restoration showing tissue adaptation

Fig. 10a: Four-month follow-up, lateral view showing mature soft tissue

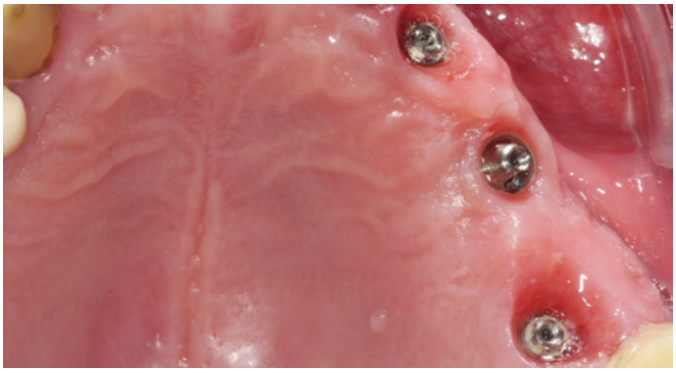

Fig. 10b: Occlusal view at four months confirming peri-implant health

Fig. 11: Final monolithic zirconia bridge in situ

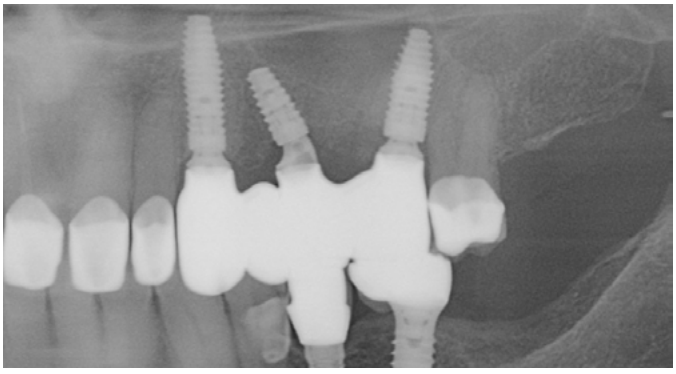

Fig. 12: Final radiograph showing stable bone levels and prosthetic fit

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT RECONSTRUCTION — A DIGITAL, FULLY GUIDED APPROACH.

A fully digital, guided workflow enabled precise implant placement and immediate restoration for a 78-year-old patient with an unstable denture, delivering fast, aesthetic and functional results.

Dr. Jan Spieckermann
Praxis für Oralchirurgie & Implantologie,
Chemnitz,
Germany

TREATMENT TIME

2 hours surgery, ½-hour provisional same day

TOOTH NUMBERS

16–26

TREATMENT TYPE

Full-arch rehabilitation with CONELOG® PROGRESSIVE-LINE.

PRODUCTS USED

- **CONELOG® PROGRESSIVE-LINE implants**
- **CONELOG® Multi-unit Abutments**

INITIAL PRESENTATION

A 78-year-old male patient presented with significant functional limitations in the upper jaw. Following the extraction of several maxillary teeth years prior, he had been wearing a removable telescopic denture. This solution had served him for an extended period; however, the recent fracture of a telescopic crown on a previously root canal-treated canine critically compromised the denture's retention and stability (Fig. 1 and 2).

The patient expressed increasing frustration due to the constant movement of the denture, which affected both his comfort and confidence. His primary desire was to regain a fixed, stable solution that restored natural aesthetics and function. The patient was otherwise in good general health, with no systemic conditions or contraindications for implant surgery.

TREATMENT PLANNING AND DIAGNOSIS

The case was meticulously planned using a fully digital workflow, enabling both the surgical and prosthetic teams to collaborate closely. Diagnostic steps included:

- Cone Beam Computed Tomography (CBCT) to assess bone quality and volume.
- Digital intraoral impressions to capture accurate dental arch anatomy.
- Facial scanning to aid in aesthetic planning and harmonize the prosthetic outcome with the patient's facial structure.

Based on these records, a virtual diagnostic wax-up was created to visualize the proposed final prosthesis. This was 3D-printed and virtual evaluated with the patient to ensure alignment with his expectations (Fig. 3 and 4).

Once the patient approved the design, a detailed prosthetic-driven surgical plan was developed using SMOP surgical planning software. Two fully guided surgical templates were fabricated, incorporating PROGRESSIVE-LINE guide sleeves, ensuring a highly precise and accurate placement protocol (Fig. 5 and 6).

THE SURGERY AND INITIAL OUTCOMES

The surgical procedure was performed under local anesthesia, with a focus on minimal invasiveness and patient comfort (Fig. 7 and 8).

Key Surgical Steps

1 First surgical template:
- Precisely anchored on the two remaining telescopic abutment teeth.
- Facilitated accurate placement of initial implants in ideal three dimensional positions.

2 Tooth extraction phase:
- After placing the initial implants, the two remaining teeth were extracted.

3 Second surgical template:
- Fixed to the freshly placed implants.
- Enabled immediate placement of additional implants into the extraction sockets with precision.

CONELOG® Multi-unit abutments were immediately connected to all implants, allowing for a screw-retained provisional. The use of intraoral photogrammetry (Aoralscan Elite) was a pivotal step in the workflow (Fig. 9 and 10). This scanning technique accurately captured the implant positions, ensuring a passively fitting prosthesis without the traditional requirement for an intraoral verification jig or physical try-in.

Immediate Provisional

After surgery, a screw-retained, long-term temporary restoration was designed and 3D-printed with a resin material (NextDent C&B MFH "Micro Filled Hybrid") designed specifically for provisional restorations (Fig. 11 and 12). Although the clinician typically mills immediate temporaries in most cases, a printed version was selected for this instance to explore its clinical potential. A milled provisional was also produced as a backup in the event of fracture or failure. While the printed restoration demonstrated excellent fit, occlusion and aesthetics in this case, further experience is required before recommending printed provisionals for routine use.

Postoperative And Mid-Term Outcomes

Following implant placement, the patient reported immediate improvements in function and comfort. The stability of the provisional restoration allowed proper soft tissue shaping and patient adaptation.

At the 8 week follow-up, excellent hard and soft tissue stability was observed (Fig. 13–15). After six-month the long-term provisional will be removed, and the implant stability and aesthetic result will be evaluated. As final restauration a full-arch FP1 prosthesis is planned.

MAIN CLINICAL OUTCOMES

- Excellent soft and hard tissue contour and health at two months post-surgery.
- High patient satisfaction regarding postoperative pain, comfort, function, and aesthetics.
- The digital workflow allowed efficient treatment with fewer appointments, eliminating conventional steps such as physical impressions or manual jig fabrication.

BENEFITS OF CHOSEN SOLUTIONS

This case exemplifies the benefits of combining immediate implant placement with immediate provisional loading, facilitated by a fully digital workflow. The synergistic use of tools like CBCT, digital impressions, guided surgery, and intraoral photogrammetry delivered:

- Highly accurate and predictable implant positioning.
- Passive fit of prosthetic components.
- Reduced chair time and accelerated treatment timelines.
- Minimization of analogue errors traditionally associated with manual processes.
- Improved aesthetic outcomes with patient-approved virtual planning.
- Less postoperative pain
- Enhanced collaboration between the surgical, restorative, and laboratory teams.

CONCLUSION

This case highlights how modern digital dentistry, when paired with advanced implant systems such as CONELOG® PROGRESSIVE-LINE, offers patients faster, more predictable, and aesthetically superior outcomes. Immediate functional loading combined with precise digital planning greatly enhances both clinician confidence and patient satisfaction.

The use of technologies such as CBCT, SMOP-guided surgery, facial scanning, intraoral photogrammetry, and 3D-printed or milled provisionals demonstrates how fully digital workflows are no longer the future but the present standard in comprehensive implant rehabilitation.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT RECONSTRUCTION — A DIGITAL, FULLY GUIDED APPROACH.

Fig. 1: Preoperative situation with old denture

Fig. 2: Preoperative situation without denture

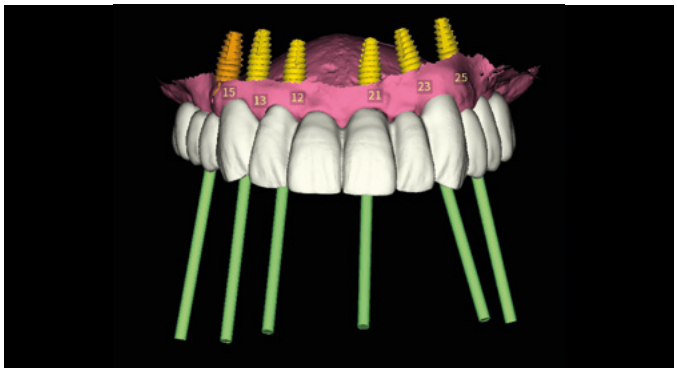

Fig. 3: Digital wax-up

Fig. 4: Face scan with digital wax up

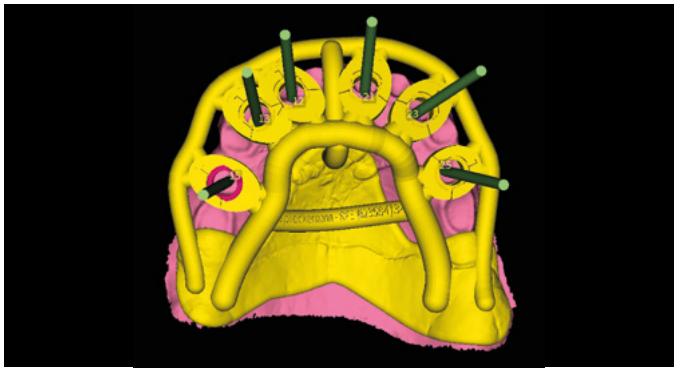

Fig. 5: SMOP stent design

Fig. 6: Printed SMOP stent

Fig. 7: Implant placement with SMOP guide

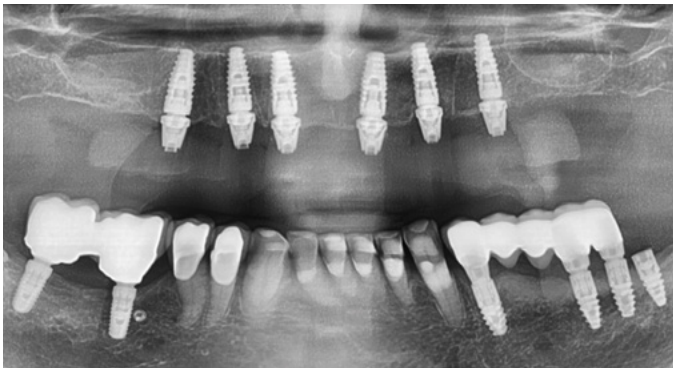

Fig. 8: Post-op panoramic x-ray

Fig. 9: AoralScan Elite intraoral photogrammetry coded scanbodies

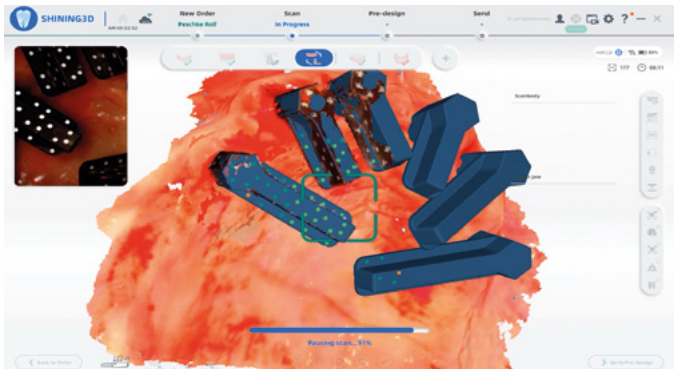

Fig. 10: AoralScan Elite intraoral photogrammetry capture — screen-shot

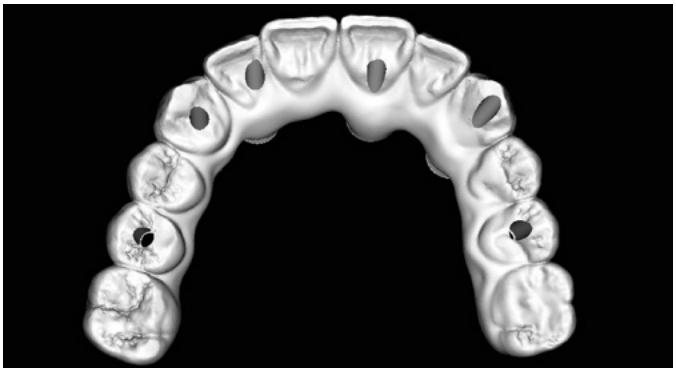

Fig. 11: Immediate temporary design

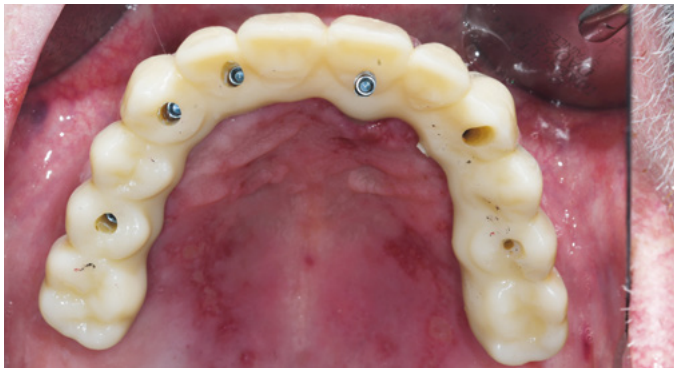

Fig. 12: Immediate temporary restoration occlusal view

Fig. 13: Preoperative Situation

Fig. 14: Immediate temporary restoration 8 weeks

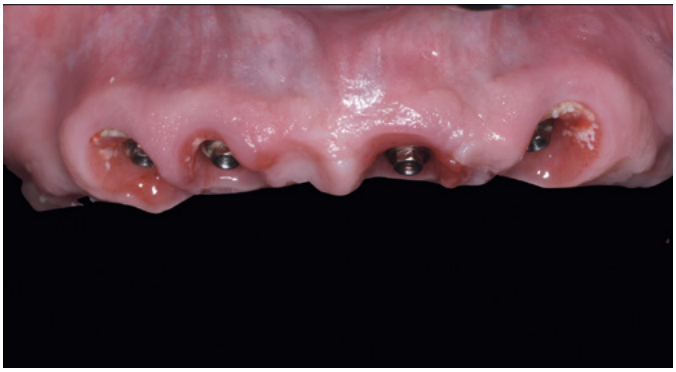

Fig. 15: Soft tissue Situation 8 weeks

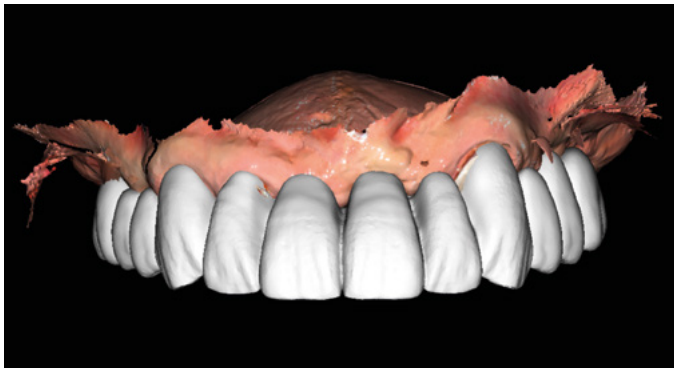

Fig. 16: Planned final restorations (future image)

IMMEDIATE IMPLANT PLACEMENT IN THE ANTERIOR ZONE USING SOCKET SHIELD AND FULLY GUIDED SURGERY.

A fully guided immediate implant placement using the socket shield technique delivered high aesthetic results in a high-risk anterior case with minimal tissue resorption.

Dr. Joerg-Martin Ruppin
Implantatzentrum
Dr. Ruppin and Colleagues,
Penzberg,
Germany

TREATMENT TIME
1.5 hours

TOOTH NUMBER
11

TREATMENT TYPE
Immediate Implant Placement (IIP) in the anterior zone using a CAMLOG® PROGRESSIVE-LINE implant, with grafting and immediate temporisation.

PRODUCTS USED
- **CAMLOG® PROGRESSIVE-LINE implant**

INITIAL PRESENTATION
A 39-year-old female patient presented with mobility in her upper right central incisor (#11), which had been traumatised more than two decades earlier and treated with root canal therapy, a ceramic post and a crown. The patient had undergone orthodontic treatment and was wearing a fixed retainer. Clinical and radiographic assessment revealed extensive external resorption and a fractured root (Figs. 1–3). Oral health was otherwise excellent, with no periodontal disease, systemic conditions or smoking history.

TREATMENT PLANNING AND DIAGNOSIS
As teeth #12 and #21 were healthy and intact, the patient asked for implant treatment to replace the fractured tooth #11.
CBCT and full digital planning were performed using coDiagnostiX® software (Fig. 4). Due to a thin biotype with multiple recessions on the canines and premolars, a high scalloped soft tissue contour combined with a very thin buccal bone plate, and the risk of hard and soft tissue recession following extraction, the case was considered high-risk for immediate implant placement.

Digital planning and fully guided immediate implant placement, using the PROGRESSIVE-LINE Guide System, enabled precise implant positioning. The socket shield (partial extraction) technique was selected to preserve the buccal plate and maintain soft tissue architecture. A CAD/CAM pre-milled acrylic crown on a Titanium base ("free" system) was fabricated to serve as an immediate provisional restoration.

THE SURGERY AND INITIAL OUTCOMES
Under local anaesthesia, the ceramic crown and post of #11 were removed, and the buccal segment of the root was carefully preserved to create a socket shield (Figs. 5–6). Pilot and sequential drilling were completed with surgical guidance (Figs. 7–8), followed by guided placement of a CAMLOG® PROGRESSIVE-LINE implant (Figs. 9–10).
The implant was placed with 45 Ncm torque and achieved primary stability. Implant stability was further verified using resonance frequency analysis (Osstell® Beacon) with an ISQ value of 68/70 (Fig. 11). The clinician emphasised ISQ (Implant Stability Quotient) resonance frequency analysis as a more reliable indicator than insertion torque alone, particularly in immediate cases where apical bone contact is limited.
Autologous bone chips collected during drilling were used to graft the space between the implant and shield. On the same day, out of occlusion, a screw-retained provisional restoration was fitted to seal the socket and support aesthetics (Fig. 12). The patient reported minimal discomfort post-operatively and experienced only minor swelling at the papillae.

MAIN CLINICAL OUTCOMES
At six months, ISQ readings had increased to 78/78, confirming successful osseointegration (Figs. 13–14). The soft tissue profile remained stable, as shown in both occlusal and frontal follow-up views (Figs. 15 and 13). Digital modelling for the final restoration was completed (Figs. 16–17), followed by fabrication of the final zirconia crown (Fig. 18).
The final result showed excellent aesthetics in frontal, lateral, and smile views (Figs. 19–22), with radiographic confirmation of stable integration (Fig. 23). A follow-up CBCT confirmed the socket shield's effectiveness in preserving the buccal plate (Fig. 24).

BENEFITS OF CHOSEN SOLUTIONS

The selection of the CAMLOG® PROGRESSIVE-LINE implant provided the high primary stability required for successful immediate implant placement. Its features work very well in soft bone or limited residual bone height (simultaneous implant placement in sinus lift cases with reduced bone height) or in immediate implant placement.

The socket shield technique allowed for preserving the buccal plate and maintaining soft tissue architecture, even in a high-risk aesthetic zone. Incorporating a Titanium base CAD/CAM "free" system enabled a screw-retained provisional restoration, despite implant angulation and anatomical limitations, ensuring prosthetic flexibility. Furthermore, resonance frequency analysis (ISQ) offered a non-invasive, objective method to assess implant stability at implant placement and over time, supporting confident immediate loading and providing valuable insights during the healing phase.

CONCLUSION

This case successfully demonstrates that even a high-risk immediacy case can be managed safely through precise digital planning, fully guided surgery, ISQ measurements and the socket shield technique, to achieve highly predictable functional and aesthetic outcomes with the CAMLOG® PROGRESSIVE-LINE implant. Furthermore, it highlights how careful planning and contemporary techniques push the boundaries of immediate implant placement without compromising long-term success.

CAMLOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT IN THE ANTERIOR ZONE USING SOCKET SHIELD AND FULLY GUIDED SURGERY.

Fig. 1: Preoperative frontal view of the anterior region

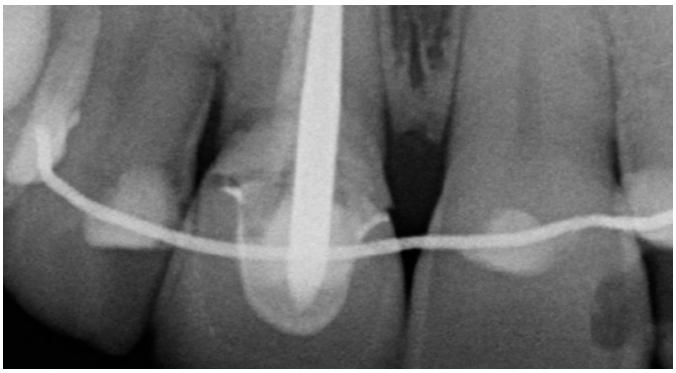

Fig. 2: Preoperative radiograph confirming root and post position

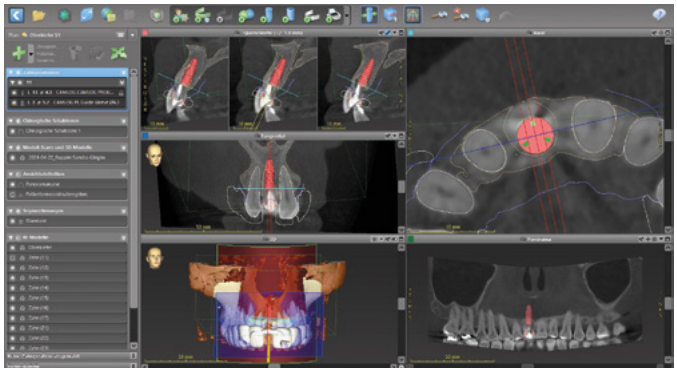

Fig. 3: CBCT scan used for digital planning

Fig. 4: Intraoral view following coronal access under local anaesthesia

Fig. 5: Socket shield preparation with buccal root segment preserved

Fig. 6: Sequential drilling under guided protocol

Fig. 7: Implant presentation prior to placement

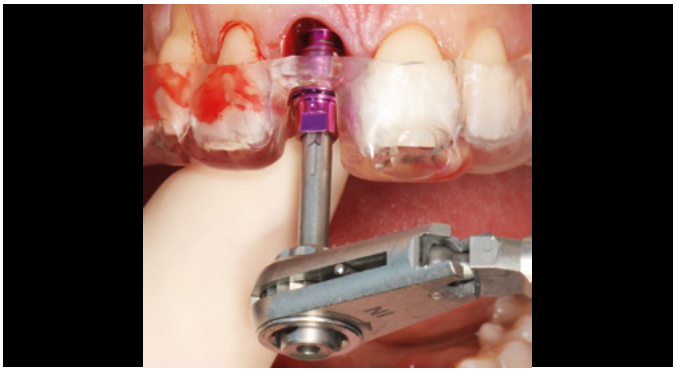

Fig. 8: Implant placement through the surgical guide

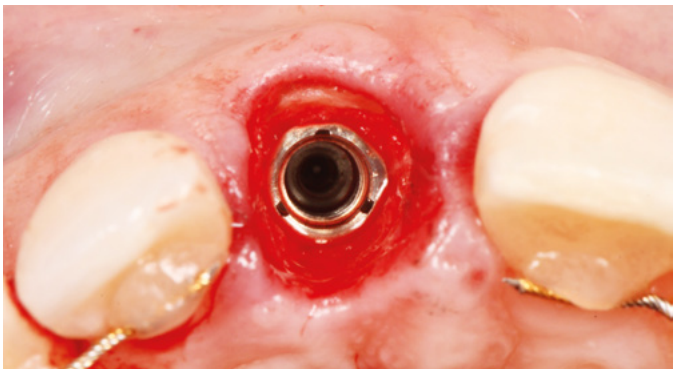

Fig. 9: Implant in situ following guided placement

Fig. 10: Frontal view of the provisional restoration at six-month follow-up

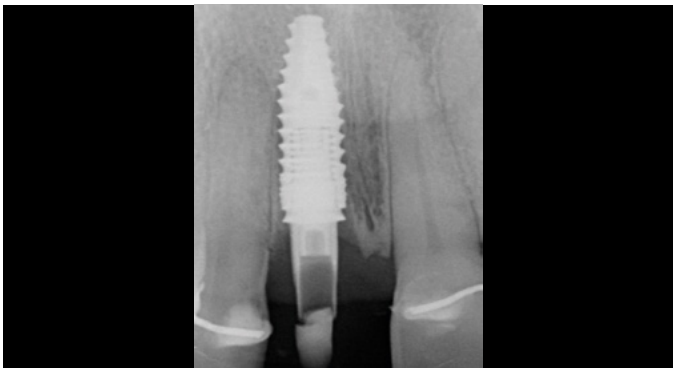

Fig. 11: Radiographic view at six-month follow-up confirming osseo-integration

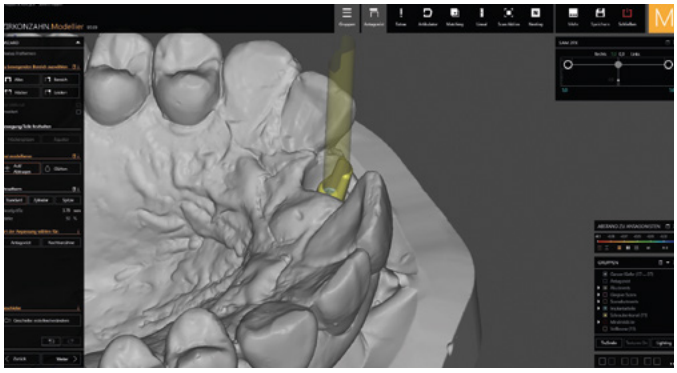

Fig. 12: Digital modelling of the implant channel for final restoration (Titanium base CAD/CAM 'free' for angulated screw channel)

Fig. 13: Fabricated final restoration prior to placement

Fig. 14: Frontal view of the final restoration in situ

Fig. 15: Lateral view of the final restoration (left side)

Fig. 16: Lateral view of the final restoration (right side)

Fig. 17: Final restoration in smile view

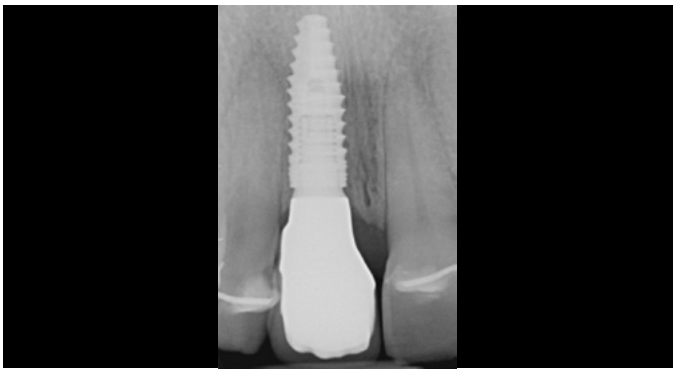

Fig. 18: Postoperative radiograph showing final restoration and implant integration

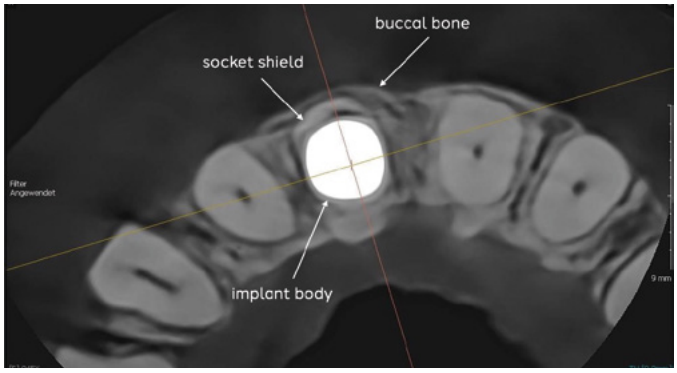

Fig. 19: CBCT scan demonstrating successful implant integration with the socket shield

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT PLACEMENT IN THE ANTERIOR MAXILLA WITH RIDGE PRESERVATION AND SOFT TISSUE OPTIMISATION.

Immediate implant placement in a previously endodontically treated central incisor with apical pathology and buccal fenestration was successfully managed using a CONELOG® PROGRESSIVE-LINE implant and MinerOss® XP, achieving long-term aesthetic stability.

Dr. Frederic Hermann
TEAM 15 – The dental clinic,
Zug,
Switzerland

TOOTH NUMBER
11

TREATMENT TIME
Four months active treatment with a four-year follow-up.

TREATMENT
Immediate implant placement with grafting and submerged healing in the anterior maxilla.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® XP**
- **Mem-Lok® Pliable collagen membrane**

INITIAL TREATMENT PRESENTATION
The 36-year-old female patient presented with pain and an aesthetically compromised restoration on tooth 11, following completed orthodontic treatment. The orthodontic therapy in our clinic had corrected an Angle Class I and deep bite, resulting in a more harmonious appearance, improved interocclusal distance and a corrected smile line (Fig. 1).
Clinical examination revealed a metal-ceramic crown restored with a root post, along with inflamed periodontal soft tissue. Radiographic evaluation confirmed the failure of the post-and-core crown restoration with persistent apical pathology. The patient had reported a history of dental trauma in her youth and had undergone two previous endodontic treatments elsewhere. An apical recession with a draining fistula was now evident, causing hard and soft tissue inflammation (Figs. 2–3).

TREATMENT PLANNING
From a medical perspective, revision of tooth 11, which was endodontically treated, was not viable. Extraction was therefore deemed necessary. Following risk assessment and informed consent, the treatment plan included immediate implant placement to preserve the peri-implant tissues and minimise disruption to the aesthetic zone. A CBCT scan was undertaken to assess the extent of apical pathology and bone loss. Thanks to the favourable alignment following orthodontic treatment, ideal conditions for implant placement were established. A minimally invasive surgical approach was planned to preserve the thin facial bone and papillae.

SURGERY AND INITIAL OUTCOMES
The periodontal fibres were severed with a sharp blade, and the tooth was carefully extracted from the socket and stored in sterile saline for later use as a provisional restoration (Fig. 4). The socket was curetted and the granulation tissue thoroughly removed. A pilot drill was guided into the palatal socket wall to achieve alignment, allowing for a palatally screw-retained hybrid abutment crown. Parallelisation pins confirmed ideal 3D implant positioning and prosthetic screw channel emergenc (Fig. 5).
To achieve high primary stability, osteotomy was under-prepared according to the surgical protocol. A CONELOG® PROGRESSIVE-LINE implant (4.3 x 13 mm) was then inserted with a final torque of 45 Ncm (Fig. 7).
Autologous bone chips were collected from the flutes of the form drill (Fig. 6) and mixed with MinerOss® XP. This graft mixture was used to fill the jumping distance between the implant and the buccal socket lamella, and to augment the apical fenestration (Fig. 9). An aesthetic buccal flap approach allowed for the placement of a resorbable collagen membrane (Mem-Lok® Pliable) over the apical defect (Fig. 8). As the implant was to heal submerged, a second collagen membrane was fixed over the implant site with tension-free cross sutures (Fig. 10).
The extracted crown was modified from the basal side and used as a bioactive provisional (BAP-concept (Dr. Frederic Hermann)). It was precisely positioned using a silicone stent and bonded to the adjacent teeth with light-curing composite (Fig. 11). The bioactive provisional allowed anatomical shaping of the basal soft tissue and supported faster tissue maturation. At the two-week review, suture removal confirmed excellent healing.

MAIN CLINICAL OUTCOMES

A monolithic zirconia hybrid crown with labial veneering, bonded to a 2 mm cuff height titanium base CAD/CAM with an individual emergence profile, was inclined four months post-surgery (Figs. 12–14).

At the four-year follow-up in March 2025, clinical and radiographic assessments confirmed stable, healthy peri-implant tissues, with well-preserved papillae and gingival contours, and stable bone levels, as well as excellent osseointegration, without signs of inflammation or resorption (Figs. 15–16).

BENEFITS OF THE CHOSEN SOLUTIONS

The implant provided excellent primary stability despite challenging anatomical bone conditions. Its progressive thread design and the conical apical implant area enabled precise placement. Autologous bone combined with MinerOss® XP supported both preservation of the facial bone lamella and integration. The use of the patient's own crown as a biologically active provisional proved to be an excellent alternative to immediate temporary implant restorations. This approach avoided premature loading while supporting soft tissue during healing.

CONCLUSION

This case demonstrates that even in the presence of apical pathology and labial bone defects, immediate implantation in the aesthetic zone can yield stable, long-term outcomes. The four-year follow-up in March 2025 confirmed healthy peri-implant conditions and maintained aesthetic integration.

The success of this case was due in part to the use of a 2 mm high titanium bonding base, which enabled the development of an ideal submucosal emergence profile, which supports the thick, stable soft tissue collar. Digital planning, minimally invasive surgical technique, biomaterials, and provisionalisation with the natural crown each contributed to a reliable and efficient treatment outcome. The CONELOG® PROGRESSIVE-LINE implant system, in combination with the under-preparation drilling protocol, provided a reliable and efficient solution for immediate implantation in this complex anterior case.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT IN THE ANTERIOR MAXILLA WITH RIDGE PRESERVATION AND SOFT TISSUE OPTIMISATION.

Fig. 1: Pre-orthodontic frontal view showing diastema and asymmetrical alignment. Post-orthodontic view showing changed smile line and improved anterior spacing.

Fig. 2: Preoperative frontal view showing apical fistula at tooth 11

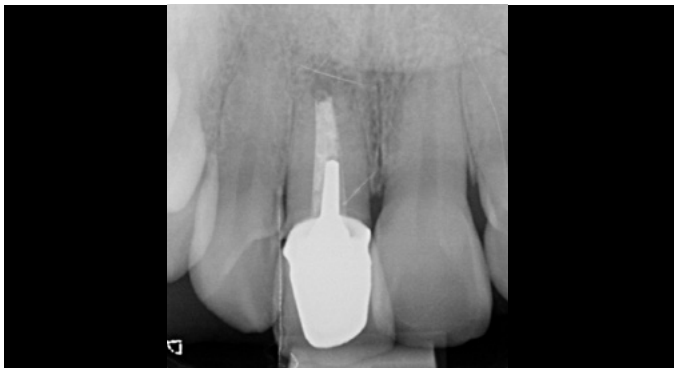

Fig. 3: Preoperative periapical radiograph showing apical lesion at tooth 11

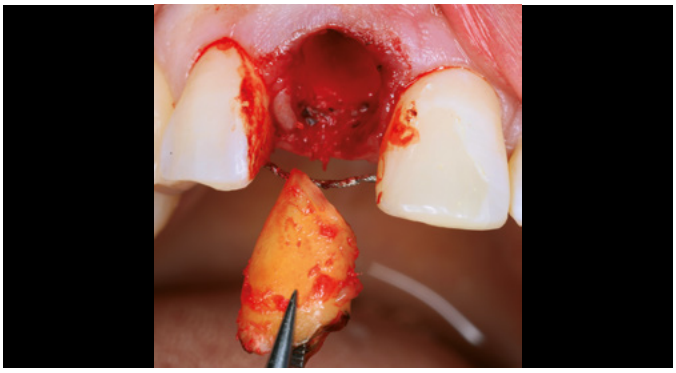

Fig. 4: Minimally invasive extraction of tooth 11

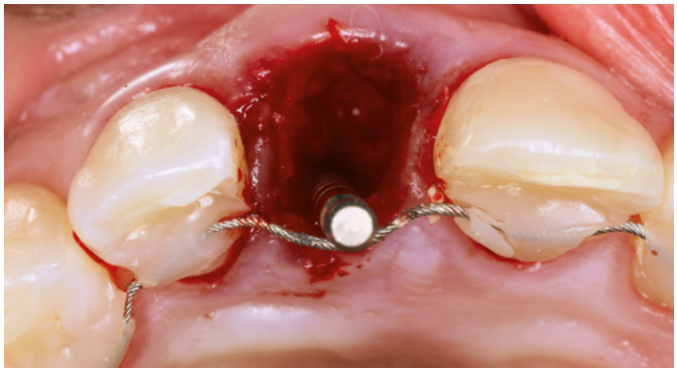

Fig. 5: Verification of palatal trajectory with parallel pin after pilot drilling

Fig. 6: Harvested autologous bone chips collected during implant bed preparation

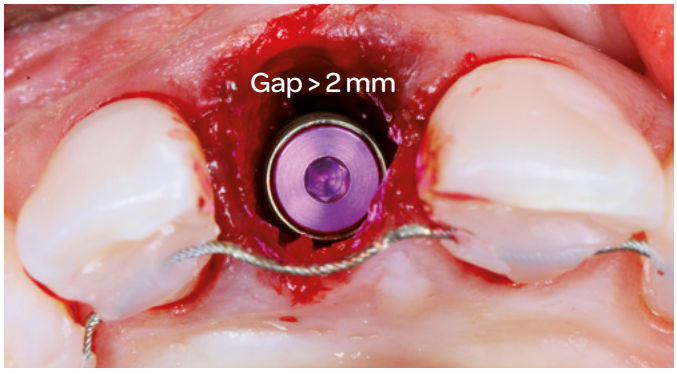

Fig. 7: Insertion of CONELOG® PROGRESSIVE-LINE 4.3 × 13 mm implant

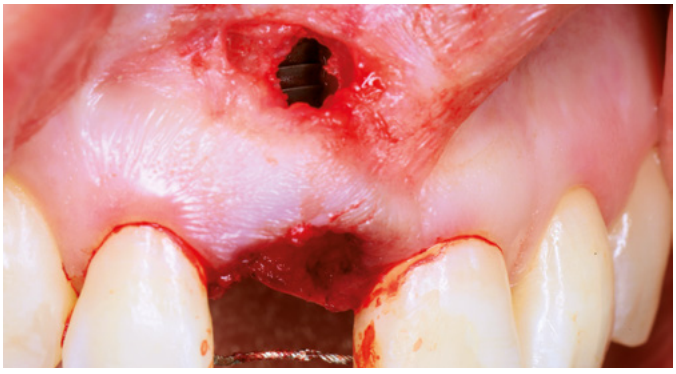

Fig. 8: Apical fenestration defect exposed with aesthetic buccal flap access within tension lines

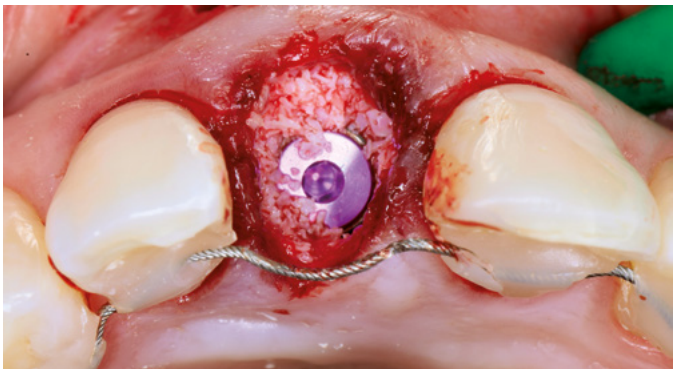

Fig. 9: Grafting of the buccal defect using MinerOss® XP and autologous bone chips

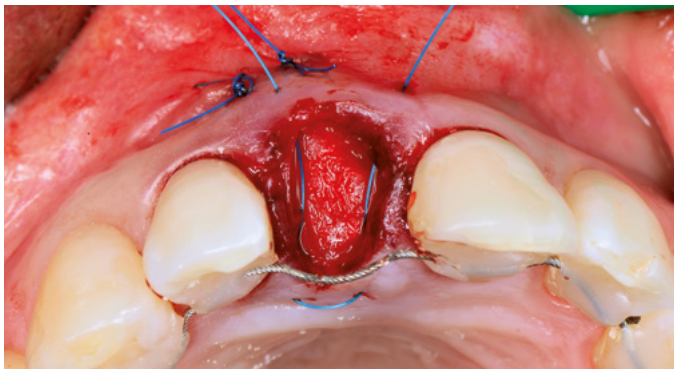

Fig. 10: Stabilisation of membrane with sutures after graft placement

Fig. 11: Post-operative view showing the BAP-concept (by Dr. Frederic Hermann)

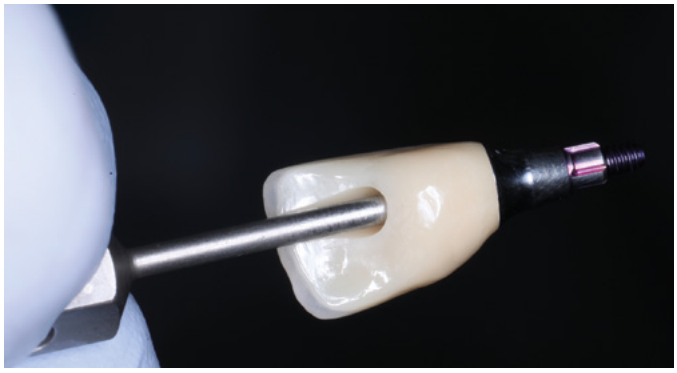

Fig. 12: Screw retained full ceramic crown (veneered) on Titanium base GH 2 mm

Fig. 13: Final view

Fig. 14: Smile line, lateral view

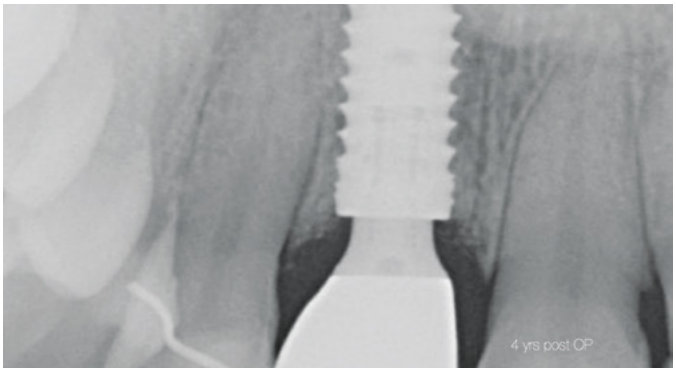

Fig. 15: Periapical radiograph showing implant integration a 4 year post-surgery result

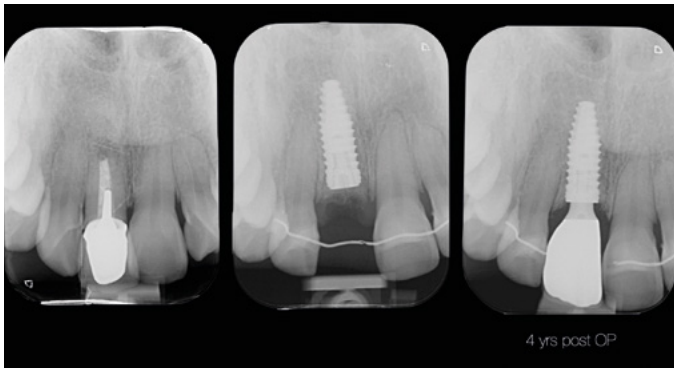

Fig. 16: Radiological follow-up documentation

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT PLACEMENT (IIP) IN THE ANTERIOR ZONE WITH A CONELOG® PROGRESSIVE-LINE IMPLANT.

A 40-year-old female presented with mobility and discolouration of tooth 12. The tooth had been traumatised 15 years prior and had a history of palatal abscesses. Radiographic evaluation revealed external root resorption, and the tooth was deemed unrestorable.

Dr. Alfonso Gil
DDS, MsC, PhD
Clinica Dental Albia,
Bilbao,
Spain

TREATMENT TIME
3 months

TOOTH NUMBER
12

TREATMENT TYPE
Immediate Implant Placement (IIP) in the Anterior zone using CONELOG® PROGRESSIVE-LINE implant with grafting and immediate provisionalization.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**

INITIAL PRESENTATION
A 40-year-old female patient presented with mobility and discolouration of tooth 12, which had a history of trauma and recurrent abscesses. As a practising physician with limited availability, she was seeking a fast, aesthetic and minimally invasive treatment solution.

TREATMENT PLANNING AND DIAGNOSIS
The treatment plan consisted of extraction of a tooth with root resorption, with guided immediate implant placement, bone grafting, and immediate provisionalization. Following healing, a ceramic implant-supported restoration would be delivered. An intraoral scan and CBCT were performed and imported into digital software to plan the implant placement virtually and ensure optimal prosthetic positioning.

THE SURGERY AND INITIAL OUTCOMES
Surgery began with the extraction of tooth 12 and debridement of the socket. A surgical guide was seated to verify fit, and implant drilling was performed through the guide. A CONELOG® PROGRESSIVE-LINE implant (3.8 x 16 mm) was placed at a screw-retained position with a torque of 40 Ncm, exactly as planned. The buccal jumping gap was grafted with a bovine bone substitute.
A Cerec® Scanbody was placed on the implant, and an intraoral scan was taken to fabricate the immediate provisional. The provisional crown was milled in the laboratory from a resin-based CAD/CAM material and screw-retained on the implant. The implant was left to heal under the provisional for 10 weeks.
After the healing period, osseointegration was confirmed, and the soft tissue emergence profile was of ideal dimensions for the definitive crown, mimicking the contralateral incisor. A final intraoral scan was taken, and a CAD/CAM veneered lithium disilicate crown was fabricated and cemented onto a titanium base. The definitive crown was screwed onto the implant at 25 Ncm with a passive fit and required no occlusal adjustments.

BENEFITS OF CHOSEN SOLUTIONS
The key advantage in this case was the immediacy protocol, which significantly streamlined treatment. The approach required only three visits:
1 Extraction, implant placement, grafting, and provisionalisation
2 Digital impression with IOS
3 Definitive restoration delivery
This simplified pathway was ideal for the busy physician patient, who particularly appreciated the reduced number of appointments and the excellent aesthetic outcome.

MAIN CLINICAL OUTCOMES & CONCLUSION

The treatment successfully rehabilitated a failing lateral incisor using a streamlined immediate implant protocol. The integration of digital technology allowed for minimal chair time and an excellent aesthetic outcome. The patient was delighted with the reduced treatment duration and the simplified process, which accommodated her professional schedule. This case highlights the predictability and efficiency of immediate implant protocols in the aesthetic zone.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT (IIP) IN THE ANTERIOR ZONE WITH A CONELOG® PROGRESSIVE-LINE IMPLANT.

Fig. 1: Initial clinical situation with a failing 12

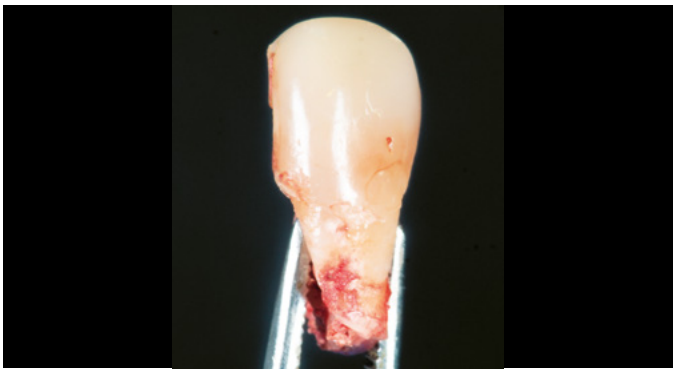

Fig. 2: Extraction of tooth 12 with external root resorption

Fig. 3: Guided implant surgery

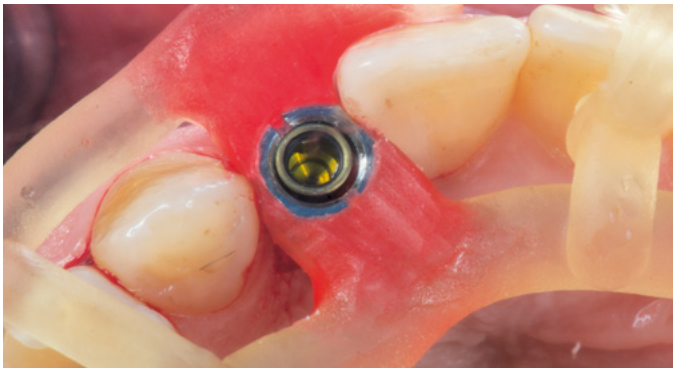

Fig. 4: Implant placed at a screw-retained position

Fig. 5: Cerec® Scanbody for intraoral scan of the implant

Fig. 6: Periapical radiograph of the immediate implant 12

Fig. 7: Delivery of immediate resin-based implant provisional crown

Fig. 8: Emergence profile after 10 weeks of healing

Fig. 9: Definitive digital impression (IOS) of the integrated implant

Fig. 10: Veneered lithium disilicate screw-retained implant restoration

Fig. 11: Final radiograph with implant restoration in place

Fig. 12: Final clinical situation with the delivery of the all-ceramic implant-supported restoration

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT PLACEMENT AND SOFT TISSUE AUGMENTATION IN A COMPROMISED LATERAL INCISOR CASE USING A FULLY GUIDED WORKFLOW.

A fractured upper lateral incisor was successfully managed through a guided immediate implant placement protocol with bone and soft tissue grafting, resulting in a stable and aesthetic outcome.



Dr. Alvaro Blasi,
Dr. Gonzalo Blasi,
Dr. Ricardo Palacios
Blasi Dental Clinic,
Barcelona,
Spain

TREATMENT TIME
4 months

TOOTH NUMBERS
12

TREATMENT TYPE
Immediate implant placement in the anterior zone using a CONELOG® PROGRESSIVE-LINE implant, with grafting and temporisation.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® X**

INITIAL PRESENTATION
A patient presented with a horizontal fracture of the upper left lateral incisor (tooth 1.2), with no clinical signs of suppuration or bleeding. The periodontal phenotype was thin, and the buccal bone wall was minimally thick, increasing the risk of soft tissue recession following extraction. A minimally invasive and digitally planned treatment was chosen to preserve tissue architecture and ensure a predictable aesthetic result.

TREATMENT PLANNING AND DIAGNOSIS
A CBCT and intraoral scans assessed the site, and coDiagnostiX® software was used to plan implant positioning and design the surgical guide virtually. The plan included immediate implant placement, filling the buccal gap with a xenograft and a soft tissue graft from the maxillary tuberosity to enhance soft tissue thickness in this high-risk aesthetic area.

THE SURGERY AND INITIAL OUTCOMES
A minimally invasive extraction was performed using the Benex® system to preserve the thin buccal bone. A 3.3 x 11 mm CONELOG® PROGRESSIVE-LINE implant was placed using a fully guided protocol. Despite the narrow implant diameter, a torque of 20 Ncm was achieved, facilitated by good palatal bone availability, under-preparation of the osteotomy and the macro design of the implant.
The peri-implant gap was grafted with MinerOss® X, chosen for its slow resorption profile and volume-stabilising characteristics. A connective tissue graft was harvested from the tuberosity by performing a distal wedge in the region of tooth 1.8. The graft was secured in a buccal pouch using a horizontal mattress suture with 6-0 polypropylene to support the emergence profile and soft tissue volume. A customised healing abutment was placed to seal the socket and guide soft tissue healing. A provisional resin-bonded restoration was applied out of occlusion.

MAIN CLINICAL OUTCOMES
Four months post-placement, the implant site exhibited stable soft tissue contours and full graft integration. A screw-retained lithium disilicate crown was delivered and bonded to a customised anodised titanium abutment. Radiographs confirmed excellent osseointegration and bone preservation. Post-operative care included chlorhexidine 0.12% gel application twice daily for 14 days. The patient expressed high satisfaction with the aesthetic result, and no recession or tissue shrinkage was observed during the healing period.

BENEFITS OF CHOSEN SOLUTIONS

The chosen treatment approach provided several clinical advantages. The fully guided protocol using coDiagnostiX software allowed for precise and minimally invasive implant placement, which was particularly beneficial given the thin buccal bone anatomy. Grafting with MinerOss® X helped to maintain buccal contour and support volume stability in the thin periodontal phenotype. Using a connective tissue graft harvested from the tuberosity further enhanced soft tissue thickness and it was placed with minimal trauma using horizontal mattress sutures for secure adaptation.

A customised healing abutment and staged provisionalisation supported controlled soft tissue maturation during healing. Finally, the restoration was completed with a screw-retained ceramic crown on a customised anodised titanium abutment, providing long-term stability and a highly aesthetic result.

CONCLUSION

This case demonstrates that immediate implant placement with simultaneous bone and soft tissue grafting, supported by a guided protocol and digital planning, can deliver stable, aesthetic and predictable results even in challenging thin biotype scenarios.

CONELOG® PROGRESSIVE-LINE.
IMMEDIATE IMPLANT PLACEMENT AND SOFT TISSUE AUGMENTATION IN A COMPROMISED LATERAL INCISOR CASE USING A FULLY GUIDED WORKFLOW.

Fig. 1a: Initial presentation showing the fractured tooth

Fig. 1b: Preoperative radiograph of tooth 12

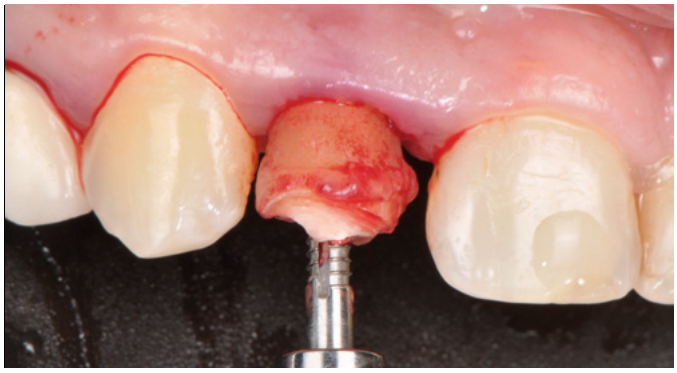

Fig. 2: Minimally invasive extraction using the Benex® system

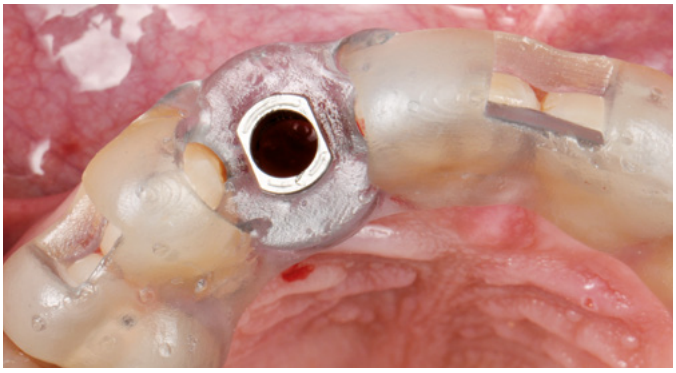

Fig. 3: Fully seated surgical guide for guided implant placement

Fig. 4: Drilling through the surgical guide

Fig. 5: Radiograph showing implant placement with good apical anchorage

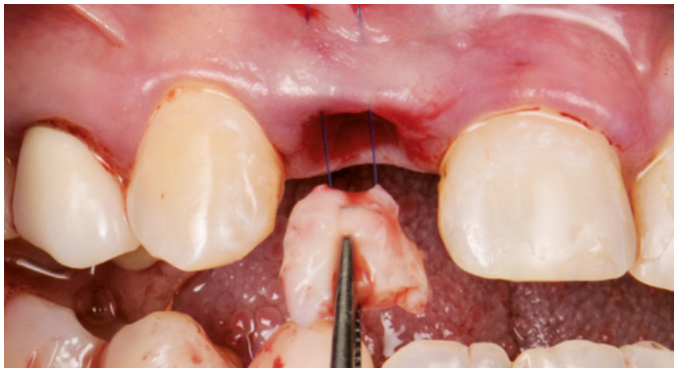

Fig. 6: Suturing the connective tissue graft with horizontal mattress technique

Fig. 7: Implant with provisional restoration and suturing

Fig. 8: Custom titanium abutment before final crown delivery

Fig. 9: Screw-retained ceramic crown being placed

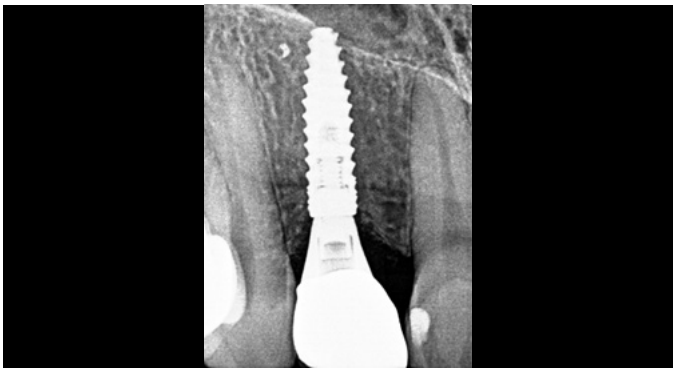

Fig. 10: Final radiograph showing implant integration and bone preservation

Fig. 11: Final clinical image showing excellent soft tissue outcome

CONELOG® PROGRESSIVE-LINE.

RESTORING A CENTRAL INCISOR WITHOUT COMPROMISING SOFT OR HARD TISSUE VOLUME.

A 67-year-old female patient presented with a broken central incisor. The tooth in question had been restored with a crown several years ago, but this had since detached. The patient did not report being in pain, though she was concerned about the appearance of her smile. Her initial assessment revealed no relevant medical history and she was a non-smoker.

Dr. Ramon Gomez Meda
MEDA Dental Education,
Ponferrada,
Spain

TREATMENT TIME
30 minutes

TOOTH NUMBERS
11

TREATMENT TYPE
Immediate implant placement in the anterior zone, with grafting and temporisation.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® XP**

INITIAL PRESENTATION
A 67-year-old female patient presented with a broken central incisor. The tooth in question had been restored with a crown several years ago, but this had since detached. The patient did not report being in pain, though she was concerned about the appearance of her smile. Her initial assessment revealed no relevant medical history and she was a non-smoker.

TREATMENT PLANNING AND DIAGNOSIS
An intraoral scan and a CBCT image were acquired as part of the comprehensive assessment. The images were matched using dental Blue Sky Bio software to facilitate the design of the surgical guide, using a prosthetically-driven planning approach to find the ideal 3D position of the implant. The surgical template was 3D printed and sterilised in preparation for surgery.

THE SURGERY AND INITIAL OUTCOMES
The remaining root was carefully and atraumatically extracted using a Benex® pull-out device. The surgical guide was fitted in the mouth and a CONELOG® PROGRESSIVE-LINE implant with conical connection was immediately placed, torqued to above 50 Ncm for high primary stability. The space between the implant and the facial cortical bone plate was filled with MinerOss® XP biomaterial and a connective tissue graft was tunnelled around the neck of the implant. This was harvested from the tuberosity, de-epithelialised, and added around the neck of the implant. The objective of this procedure was to ensure long-term papilla stability and prevent both the future collapse of the soft tissue and opening of the embrasures. This is paramount when restoring a gap in the anterior zone.

A scanbody was used to register the implant position and a provisional restoration was designed in exocad software and milled in PMMA. The temporary restoration would be used to help stabilise the connective tissue graft, while also shaping the soft tissues to develop a good emergence profile. This is an important transition stage before the final restoration.

BENEFITS OF CHOSEN SOLUTIONS
Immediate loading provides aesthetic, functional and biological advantages. The CONELOG® PROGRESSIVE-LINE implant was selected for this case because it supports immediacy by facilitating high primary stability. MinerOss® XP is my preferred bone substitute in immediate cases because of its handling and low rate of resorption.

MAIN CLINICAL OUTCOMES AND CONCLUSION
Surgical healing was uneventful and the patient reported no pain or discomfort. Papillae remained healthy and filled the embrasures completely. A final zirconia restoration was ultimately placed, designed to slightly alter the over-contoured emergence profile from the exocad software. This simplified the fitting protocol and further prevented the collapse of the hard or soft tissue during the final healing phase.

Successful implant placement was achieved with a simultaneous fixed temporary restoration in this case. In doing so, the aesthetic and functional demands of the patient were fulfilled without compromising their long-term biological needs.

Fig. 1: Pre-operative anterior view

Fig. 2: Pre-operative occlusal view

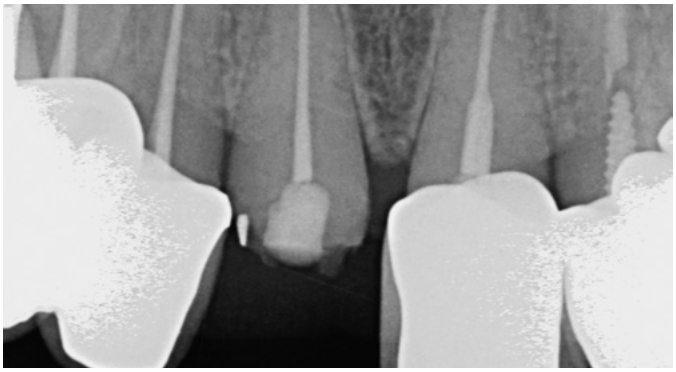

Fig. 3: Pre-operative radiograph

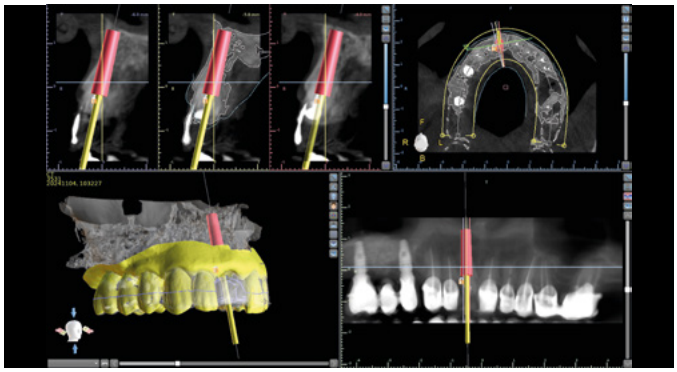

Fig. 4: Prosthetically-driven implant design

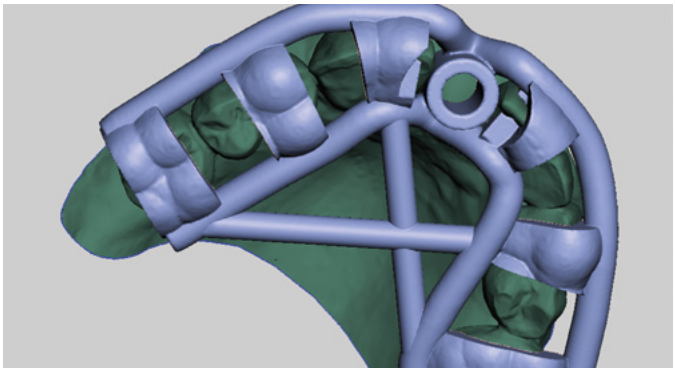

Fig. 5: Digitally designed surgical guide

Fig. 6: Implant placed through surgical guide

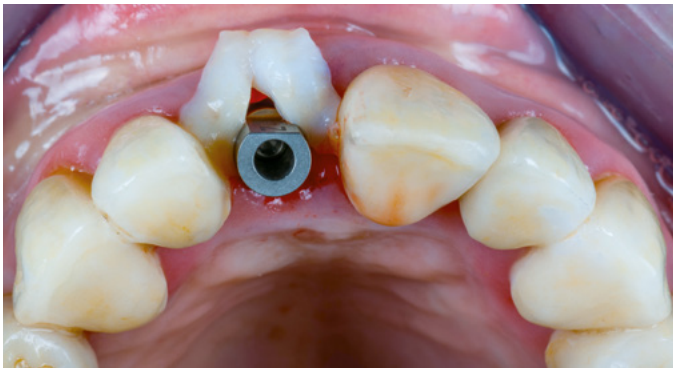

Fig. 7: Connective tissue graft placed to increase soft tissue dimension

Fig. 8: Biomaterial packed into the space between the implant and facial cortical bone

CONELOG® PROGRESSIVE-LINE.
RESTORING A CENTRAL INCISOR WITHOUT COMPROMISING SOFT OR HARD TISSUE VOLUME.

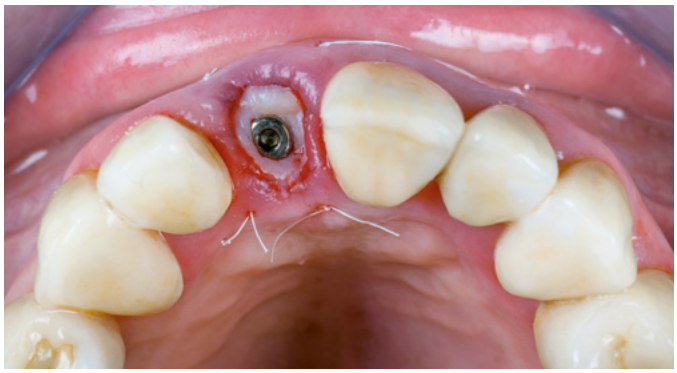

Fig. 9: Implant occlusal view immediately post-operative

Fig. 10: Temporary crown placed in PMMA

Fig. 11: Immediately post-operative

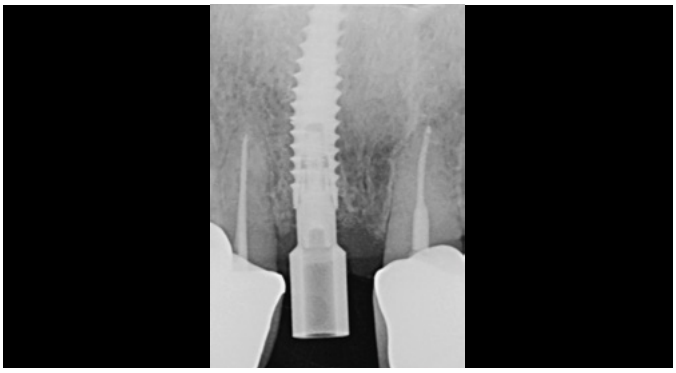

Fig. 12a: 3-months post-operative radiograph

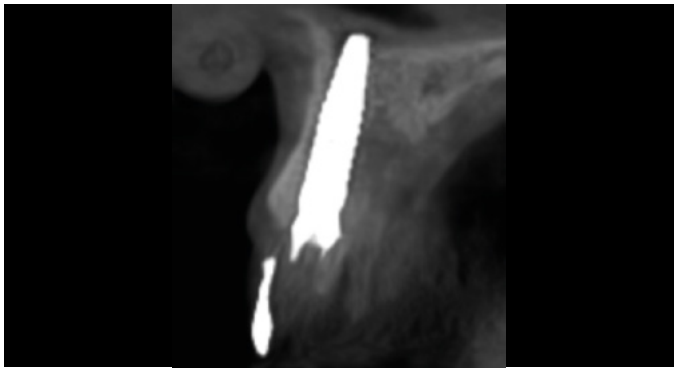

Fig. 12b: 3-months post-operative CBCT

Fig. 13: 3-months post-operative

CAMLOG® PROGRESSIVE-LINE.

FULL-ARCH REHABILITATION MADE SIMPLER WITH IMMEDIATE PROTOCOLS AND A DIGITAL WORKFLOW.

An 80-year-old patient attended the practice with a failing upper dentition. He had old bridges in situ, as well as decay and several periodontally-compromised teeth.

Dr. Eric Normand
Cabinet dentaire le 72 Parc Bordelais,
Bordeaux,
France

TREATMENT TIME
Six months

TOOTH NUMBERS
Full arch

TREATMENT TYPE
Full-arch rehabilitation with immediate placement of six implants (two tilted to avoid sinus grafting) after extractions and an immediate screw-retained temporary prosthesis fitted.

PRODUCTS USED
- **CAMLOG® PROGRESSIVE-LINE implants**
- **Guide system PROGRESSIVE-LINE**
- **COMFOUR® abutments**

INITIAL PRESENTATION
An 80-year-old patient attended the practice with a failing upper dentition. He had old bridges in situ, as well as decay and several periodontally-compromised teeth.

TREATMENT PLANNING AND DIAGNOSIS
A comprehensive range of diagnostic imaging was taken to assess the situation. The radiographs confirmed the need to extract various remaining teeth and so a full-arch solution was suggested to the patient as his best option. Upon discussing the benefits and limitations, he provided informed consent.
Treatment was planned digitally, including extractions with immediate implant placement and loading, using a guided approach. Six implants would be placed, with four straight abutments in the anterior and two angled abutments in the posterior to allow for the ideal prosthetic positioning. The CT scans and digital impressions were sent to the lab for the fabrication of the surgical guide. No grafting (except alveolar preservation and gap filling) was indicated due to sufficient bone volume at the planned surgical sites.

THE SURGERY AND INITIAL OUTCOMES
All but four teeth were extracted as atraumatically as possible. The remaining teeth were used to stabilise the surgical guide, before also being removed. Six CAMLOG® PROGRESSIVE-LINE implants were then placed through the guide at the pre-determined positions, angles and depths. Four straight bar abutments (COMFOUR® System) were placed on the anterior implants and 30° angled-abutments were placed on the two posterior implants. The digital workflow increases simplicity and precision for this treatment stage.
Post-operative impressions were taken, a temporary bridge was milled in PMMA and placed a few hours after surgery. The patient was given standard post-operative instructions to care for the mouth during healing.
The final prosthesis was fabricated with high precision in two appointments.

BENEFITS OF CHOSEN SOLUTIONS
I chose the CAMLOG® PROGRESSIVE-LINE implants for this case because I was certain to achieve good primary stability of the implants (>30 Ncm), allowing immediate loading. The accuracy of the system ensured efficiency and safety.
The tilted implants, alongside immediate protocols, allow the clinician to avoid more complex surgery, such as sinus augmentations.
The PMMA temporary bridge is strong and can last many months. Fabricating it after the surgery allows very high precision and avoids chairside work. The milled zirconia bridge with a milled anodised titanium framework also affords strength and aesthetics, while this avoids ceramic shipping.

MAIN CLINICAL OUTCOMES & CONCLUSION
The patient was very happy with the outcome achieved in this case. The treatment was safe and efficient, especially with the inclusion of guided surgery and a digital workflow, which further served to ensure patient comfort and excellent aesthetic outcomes. The patient also appreciated that he was never left edentulous (just a few hours).

APPOINTMENT SUMMARY

1 First consultation / CT scans / pictures / digital impression / case study.
2 Extractions / immediate implantation / abutment placement / digital impression.
3 After a few hours of fabrication, placement of the temporary bridge.
4 After six months, achieving osseointegration and soft tissues stability, digital impression to records the soft tissues, try-in of the mock-up and physical stent to secure the position of the implants. The final bridge is immediately produced.
5 After a few days of fabrication, delivery of the final bridge.

CAMLOG® PROGRESSIVE-LINE.
FULL-ARCH REHABILITATION MADE SIMPLER WITH IMMEDIATE PROTOCOLS AND A DIGITAL WORKFLOW.

Fig. 1: Initial situation

Fig. 2: Initial situation. The teeth are very mobile

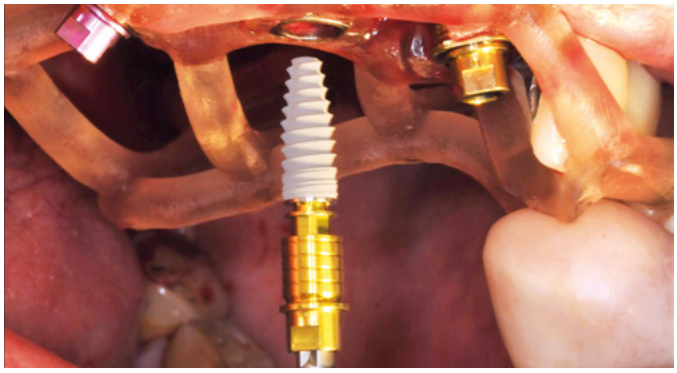

Fig. 3: The teeth are extracted. 6 implants are placed with fully guided surgery

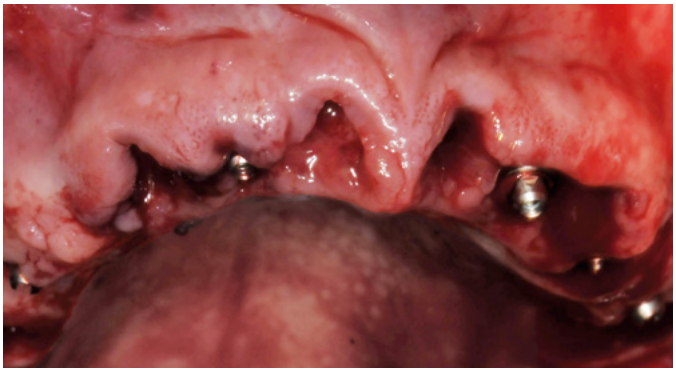

Fig. 4: The bar abutments (COMFOUR® System) are placed, 4 straight and 2 angled. The alveolae are filled afterwords with biomaterials

Fig. 5: A digital impression is taken and a full temporay prosthesis is milled in PMMA, delivered the same day in the afternoon

Fig. 6: Situation immediatley after loading

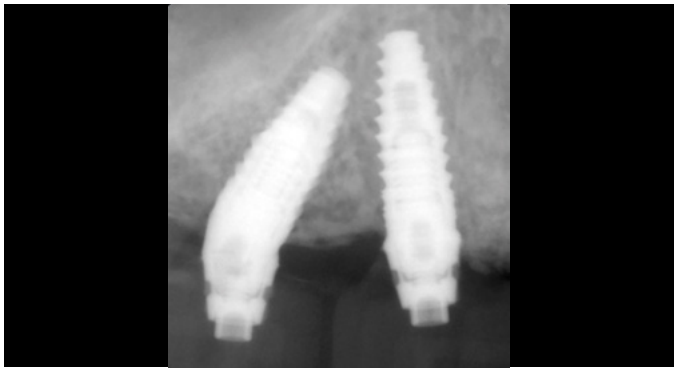

Fig. 7: X-ray of implants 14 and 16. Note the angulated 16 to avoid the maxillary sinus and 30° angled abutment

Fig. 8: Intra-oral situation after 4 months

Fig. 9: Precision situation tray with PMMA, resin and impression transfers, master cast and aesthetic try-in mock-up

Fig. 10: Bridge with a milled titanium frame and milled zirconia (Corus LSO Dental lab). The full-arch implant-supported prosthesis includes prosthetic gingiva to compensate for the loss of soft tissue and bone

Fig. 11: Bridge with a milled titanium frame and milled zirconia

Fig. 12: Final situation

CAMLOG® PROGRESSIVE-LINE.

IMMEDIATE IMPLANT TEMPORISATION WITH AN ANTERIOR THREE-UNIT BRIDGE.

A 67-year-old patient presented having previously lost his anterior maxilla bridge twice. He was seeking a fixed solution with improved aesthetics and was referred by his routine clinician for implant treatment.

Dr. Gautier Dupont
Cabinet dentaire le 72 Parc Bordelais,
Bordeaux,
France

TREATMENT TIME
1 hour (referred for surgery and temporisation only)

TOOTH NUMBERS
21, 12

TREATMENT TYPE
Immediate implant placement in the anterior zone using CAMLOG® PROGRESSIVE-LINE implants with temporisation.

PRODUCTS USED
- **CAMLOG® PROGRESSIVE-LINE implants**
- **MinerOss® XP**
- **Striate+™**

INITIAL PRESENTATION
A 67-year-old patient presented having previously lost his anterior maxilla bridge twice. He was seeking a fixed solution with improved aesthetics and was referred by his routine clinician for implant treatment.

TREATMENT PLANNING AND DIAGNOSIS
A full medical history and examination revealed he was fit and well, with no major systemic or oral health concerns. Upon assessment, the existing 12 and 21 roots would require extraction. Radiographs were taken to assess the bone volume and quality, which confirmed sufficient space to facilitate the placement of two implants. Bone grafting was indicated at the 21 site to ensure good stability. The case was ideal for immediate temporisation, with a lab-made three-unit bridge provided on the same day as surgery. The procedure, its benefits and limitations were discussed with the patient to obtain informed consent.

THE SURGERY AND INITIAL OUTCOMES
The failing tooth roots were extracted as atraumatically as possible (21 and 12). Two CAMLOG® PROGRESSIVE-LINE 3.8 mm x 13 mm implants were placed into the fresh extraction sockets. Simultaneous bone grafting was performed, using MinerOss® XP in the 21 socket to encourage increased bone volume and stability. This was secured in place with a Striate+™ resorbable collagen membrane. Empress abutments were then placed, with impressions taken for the fabrication of the temporary three-unit bridge, which was placed by the end of the day.

BENEFITS OF CHOSEN SOLUTIONS
The CAMLOG® PROGRESSIVE-LINE implants were chosen in this instance because they facilitate high primary stability, which is essential for immediate cases. The MinerOss® XP has also been shown to effectively increase implant stability, providing a highly porous inorganic porcine bone mineral matrix designed to create adequate space for new bone deposition.

MAIN CLINICAL OUTCOMES AND CONCLUSION
The patient was very satisfied with the result achieved, which solved his previous issues and met all of his expectations. The option to immediately temporise is a significant benefit for any patient, reducing treatment time and encouraging a rapid recovery when only a one-stage surgical procedure is required. Using evidence-based products and techniques are important for optimising outcomes.

Fig. 1: Pre-operative anterior view

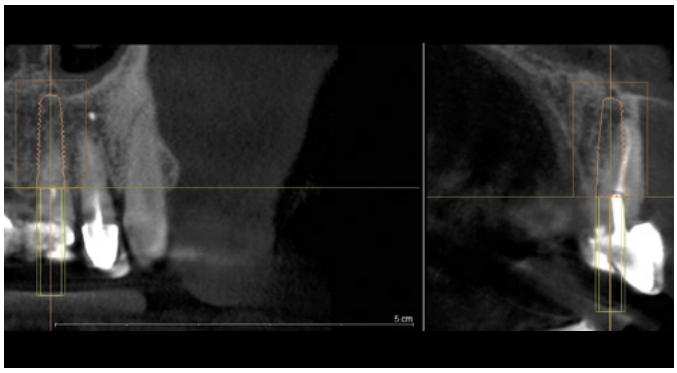

Fig. 2a: Pre-operative radiograph with implant planning

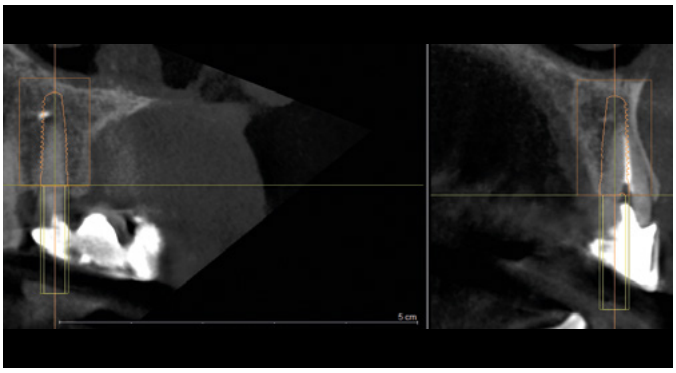

Fig. 2b: Pre-operative radiograph with implant planning

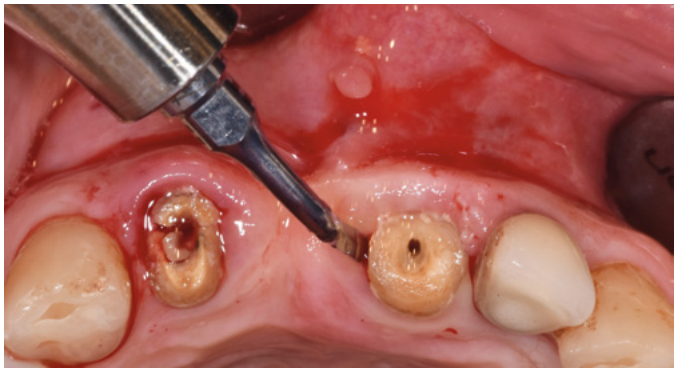

Fig. 3: Atraumatic extraction of the 12 and 21

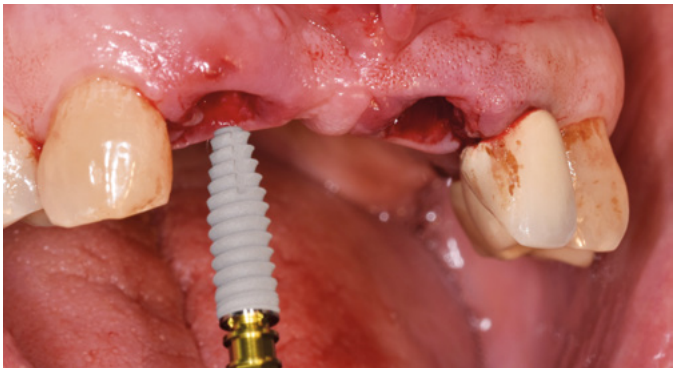

Fig. 4: Implant placement

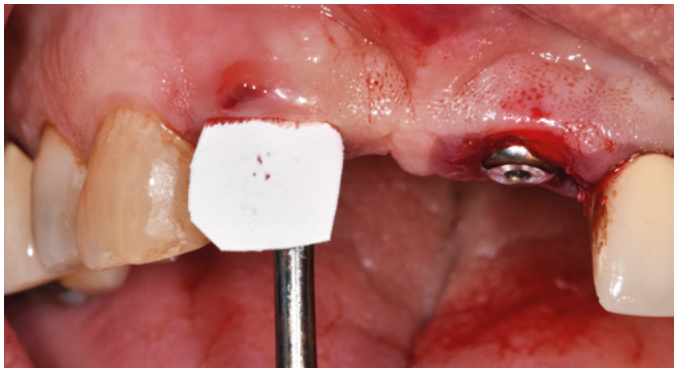

Fig. 5: Membrane placed to secure the bone graft material around the implant

Fig. 6: Implants placed

Fig. 7: Scanbodies placed

Fig. 8: Temporary restoration

Fig. 9: Provisionalisation

Fig. 10: Provisional on day of surgery

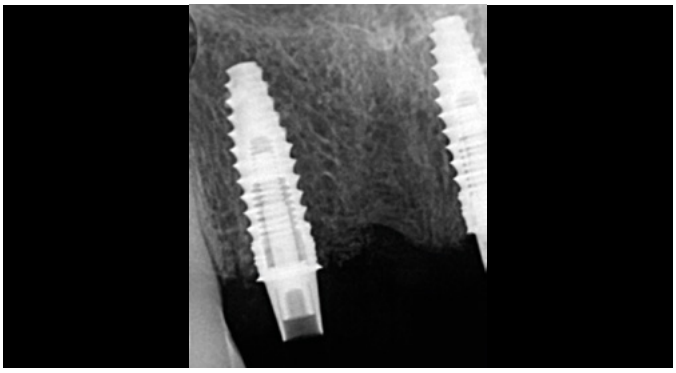

Fig. 11a: Post-operative radiograph

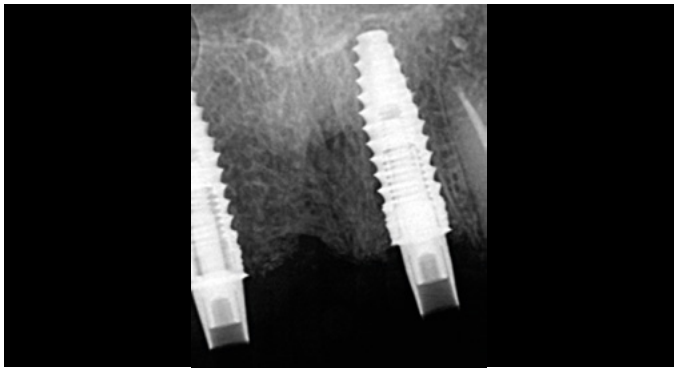

Fig. 11b: Post-operative radiograph

CONELOG® PROGRESSIVE-LINE.

FULL-ARCH REHABILITATION IN PATIENTS WITH A HISTORY OF PERIODONTITIS.

A 55-year-old male patient presented with pain (infection) in the maxilla and a mobile existing bridge. Tooth 16 was extracted immediately and the patient was referred for immediate implant placement and a full arch provisional prosthesis to restore the smile.

Dr. Remy Tanimura
Tanimura Implant Clinic,
Paris,
France

TREATMENT TIME
12 months

TOOTH NUMBERS
16–27 (Full arch)

TREATMENT TYPE
Full-arch rehabilitation with immediately placed implants, augmentation, sinus lift and temporary fixed screw-retained restoration.

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implants**
- **CAMLOG® SCREW-LINE implant**
- **Xenograft (Bovine HA) SmartBone®**
- **Mem-Lok® membrane**
- **Bar abutments (COMFOUR® system)**

INITIAL PRESENTATION
A 55-year-old male patient presented with pain (infection) in the maxilla and a mobile existing bridge. Tooth 16 was extracted immediately and the patient was referred for immediate implant placement and a full arch provisional prosthesis to restore the smile.

TREATMENT PLANNING AND DIAGNOSIS
A comprehensive assessment — including panoramic clinical photographs and x-rays — revealed a history of advanced periodontitis in both arches, an atrophic maxilla, poor oral hygiene and bruxism. The periodontally compromised teeth in the maxilla required extraction and eight implants would be immediately placed to restore the dentition. A surgical guide would be utilised to ensure precision, adjusted to the palatal mucosa and stabilised during surgery.
In the mandible, teeth 36 and 47 were indicated for extraction as well, though only one implant would be placed (in the 36 position).

THE SURGERY AND INITIAL OUTCOMES
The existing maxillary bridge was retrieved and teeth with a hopeless prognosis — 36 and 47 — were extracted atraumatically. A flap was raised and the extraction sockets were thoroughly debrided. The surgical guide was tried in the mouth to validate its stability and the occlusion.
A sinus lift was performed alongside simultaneous placement of eight CONELOG® PROGRESSIVE-LINE implants. Bar abutments from the COMFOUR® system were placed onto each of these. The bone deficiency was compensated with guided bone regeneration (GBR), placing xenograft SmartBone® material, which was secured in place with a Mem-Lok® collagen membrane. Tension-free closure was achieved before titanium sleeves were placed on the abutments and connected to the surgical guide/provisional bridge.

PROSTHETIC TREATMENT
Four months after the surgery, due to a high occlusal loading due to bruxism, the patient broke the provisional and the implant at the 16 site wasn't integrated. This was, therefore, replaced with a CAMLOG® SCREW-LINE Promote® plus implant, taking a delayed, two-step placement approach.
After 6 months of healing, a conventional impression was taken and the bridge frame was designed and milled (CAD-CAM) in order to obtain a passive fit. The emergence profile was shaped to facilitate oral hygiene. Despite oral hygiene education and regular recall, poor plaque control remains a challenge for the patient.

BENEFITS OF CHOSEN SOLUTIONS
Immediate placement and loading help the patient to retain a good quality of life, avoiding a removable denture. This technique, combined with GBR, also maintains the bony architecture. Product selection is key.
For this case, the CONELOG® PROGRESSIVE-LINE implants were chosen because they deliver good primary stability. The CAMLOG® SCREW-LINE Promote® plus implants offer a tissue level solution with a machined collar of 1.4 mm that is indicated for patients with periodontal disease. The Mem-Lok® membrane is well-tolerated and resorbable in four months, plus it is easy to shape and adapts effectively to the bone. Finally, the bar abutments of the COMFOUR® system was selected because they afford exceptional sealing with the implants and there are two diameters available to optimise aesthetic outcomes.

MAIN CLINICAL OUTCOMES AND CONCLUSION

In patients with periodontitis, oral hygiene control remains an issue. Therefore, it is highly recommended to place bone level implants at a subcrestal level with abutments placed at the time of surgery (One-Time-One-Abutment concept). Abutments need to have a gingival height of at least 2 mm with a narrow profile emergence. Also, the shape of the bridge around the abutment neck should be streamlined without over-contouring.

Regarding bruxism, we have to take into consideration the high occlusal load by selecting an implant with an optimal stress distribution macro-geometry. The number of implants is also an important factor to obtain a good stress distribution.

CONELOG® PROGRESSIVE-LINE.
FULL-ARCH REHABILITATION IN PATIENTS WITH A HISTORY OF PERIODONTITIS.

Fig. 1a: Presentation — anterior view

Fig. 1b: Presentation — occlusal view

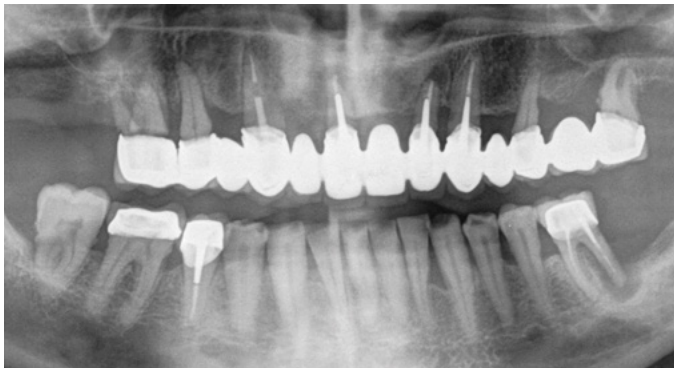

Fig. 2: Panoramic x-ray

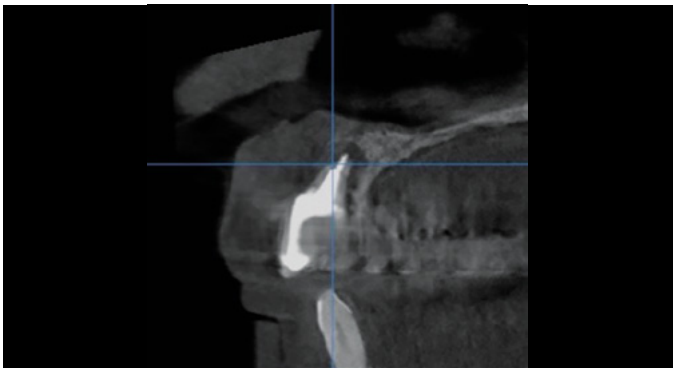

Fig. 3a: CBCT cross-section no 11

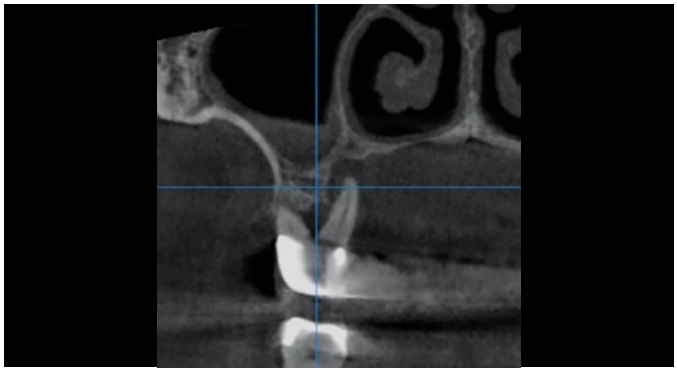

Fig. 3b: CBCT cross-section no 16

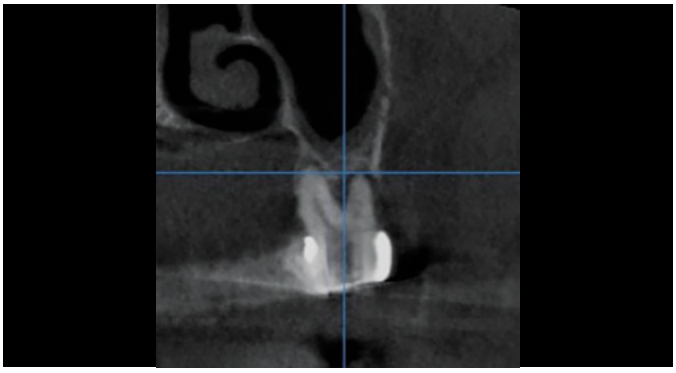

Fig. 3c: CBCT cross-section no 27

Fig. 4a: Surgical guide and privisional bridge

Fig. 4b: Surgical guide try-in and occlusion control

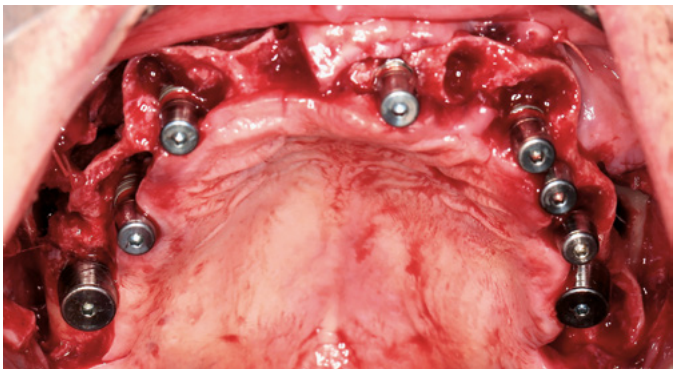

Fig. 5: Occlusal view of implants with abutments in place

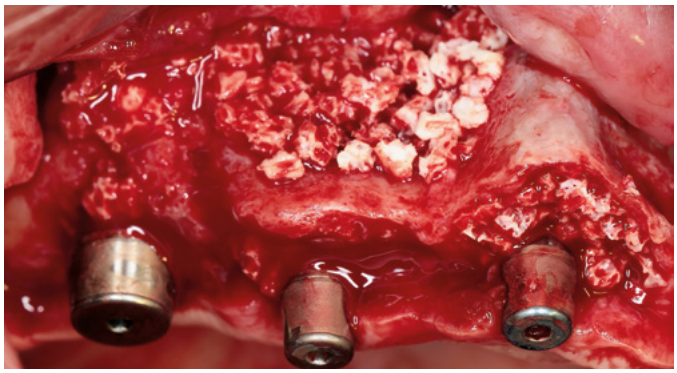

Fig. 6a: Xenograph placed

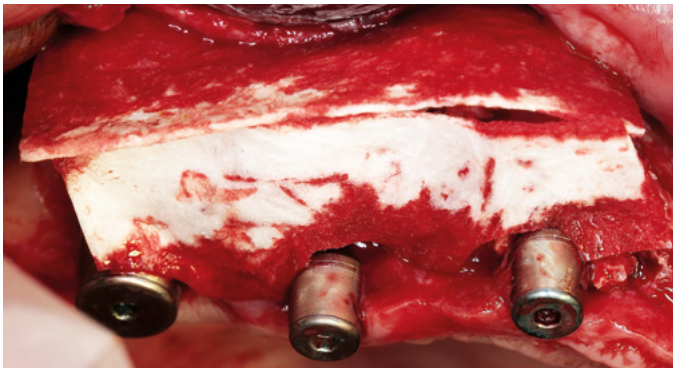

Fig. 6b: Mem-Lok® membrane securing the xenograft material in place

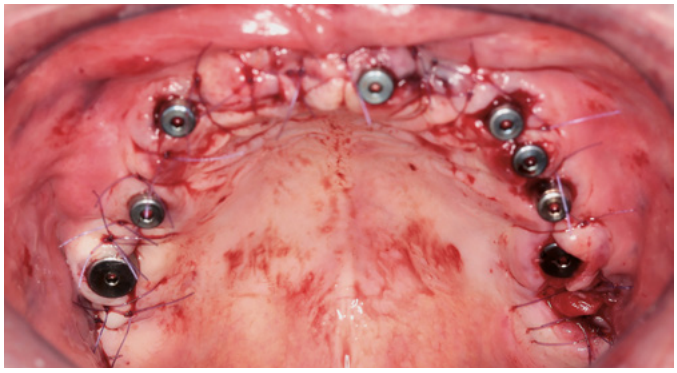

Fig. 7: Tension-free closure

Fig. 8a: Provisional bridge occlusal view

Fig. 8b: Bridge with contoured emergence profile around implants

Fig. 9: Priovisional 4 months post-op showing poor oral hygiene

Fig. 10: Implant at site 16 did not osseointegrate successfully

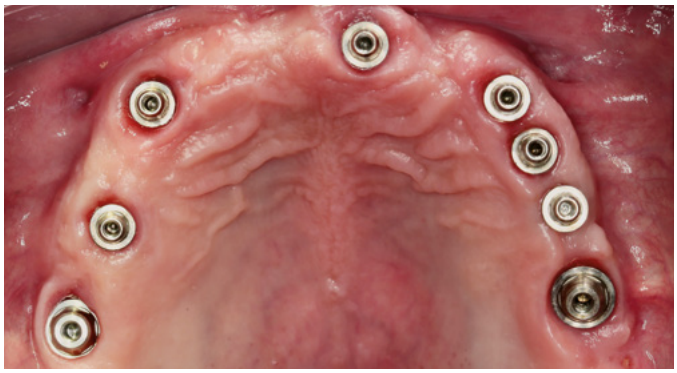

Fig. 11: 12 months post-op occlusal view of abutments and replaced 16 implant

Fig. 12: 5-year post-op anterior view

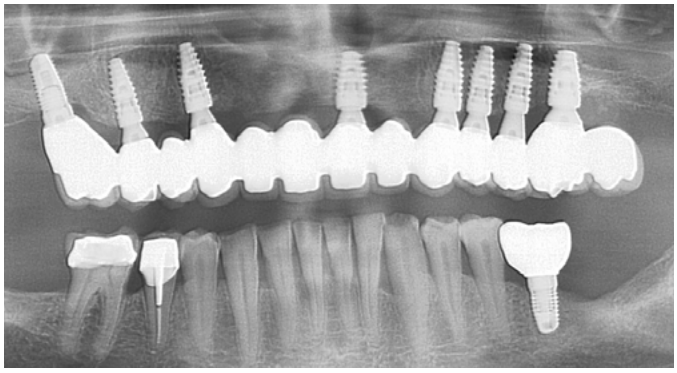

Fig. 13: 5-year post-op panoramic x-ray

CONELOG® PROGRESSIVE-LINE.

TRANSFORMING A PATIENT'S SMILE WITH DOUBLE FULL-ARCH REHABILITATION.

A 68-year-old patient presented with a partial removable denture, which was causing both functional and aesthetic concerns. The patient was seeking a fixed restoration, expressing an interest for as minor a surgical procedure as possible. A comprehensive medical and dental history revealed no systemic diseases, no current medications and the patient was a non-smoker.

Prof. Mario Beretta
Beretta Odontoiatria ed Estetica del Sorriso,
Bergamo,
Italy

TREATMENT TIME
Six months

TOOTH NUMBERS
Full-arch restoration

TREATMENT TYPE
Full-arch rehabilitation with screw-retained restorations

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implants**
- **CONELOG® Multi-unit abutments**

INITIAL PRESENTATION
A 68-year-old patient presented with a partial removable denture, which was causing both functional and aesthetic concerns. The patient was seeking a fixed restoration, expressing an interest for as minor a surgical procedure as possible. A comprehensive medical and dental history revealed no systemic diseases, no current medications and the patient was a non-smoker.

TREATMENT PLANNING AND DIAGNOSIS
Clinical photographs, an intraoral scan and a CBCT were taken as part of the assessment process. A completely digital workflow was adopted to plan treatment, using a virtual wax-up to determine the ideal 3D implant positioning. A prototype was used as a radiological stent in order to match the STL file and DICOM data from the CBCT. The same prototype was also used to evaluate the function in relation to the jaw and the aesthetics that would be delivered post-treatment. All the necessary impressions and scans were taken to facilitate the pre-paration of full-arch temporary dentures for the maxilla and mandible ahead of the surgical appointment. Data was also used to manufacture surgical guides using the RealGUIDE system from 3DIEMME Italy.

THE SURGERY AND INITIAL OUTCOMES
The stackable surgical guides were used to accurately place the implants on the day of surgery. Four CONELOG® PROGRESSIVE-LINE implants were placed in each arch, including two parallel in the anterior zones and two angled in the posterior regions. CONELOG® Multi-unit abutments were fitted and immediately loaded using the temporary prostheses previously created. The patient was given standard post-operative instructions, including dietary and oral hygiene advice.

BENEFITS OF CHOSEN SOLUTIONS
Immediate implant protocols, digital planning and guided implant placement all lead to less invasive surgery, which was important for this patient. I chose the CONELOG® PROGRESSIVE-LINE implants for this full-arch case because the system ensures the achievement of good primary stability, which is essential for this kind of rehabilitation. The CONELOG® Multi-unit abutments are also ideal for hard and soft tissue stability. Their emergence profile provides space for soft tissues and reduces stress on the peri-implant bone.

MAIN CLINICAL OUTCOMES AND CONCLUSION
Approximately four months after surgery, soft tissue management was performed, involving a free gingival graft in the lower arch to increase volume and support the papillae. The screw-retained final prostheses were provided two months later, completing treatment. This case was made possible thanks to a fully digital and guided protocol in both jaws, allowing the complete transformation of the patient's smile in a relatively short treatment time.

Fig. 1: Initial situation

Fig. 2: Intraoral view

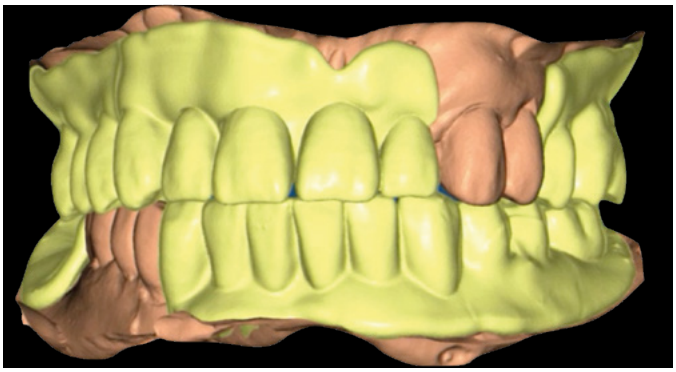

Fig. 3: Digital wax-up

Fig. 4: Prototype

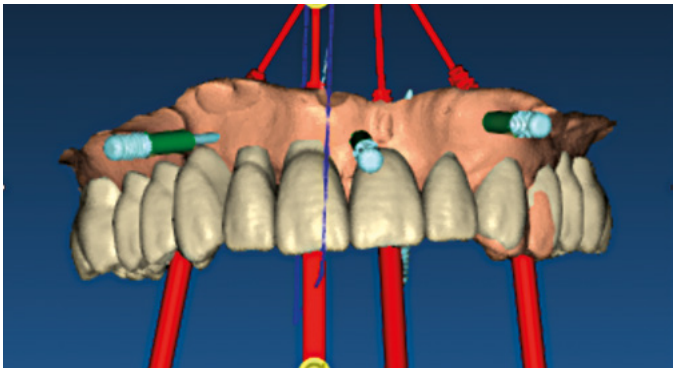

Fig. 5: Upper digital planning

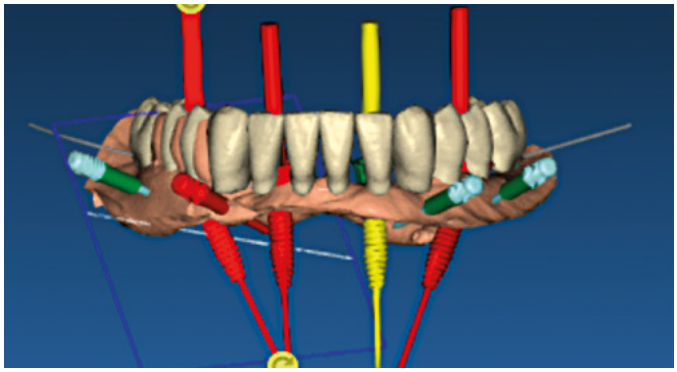

Fig. 6: Lower digital planning

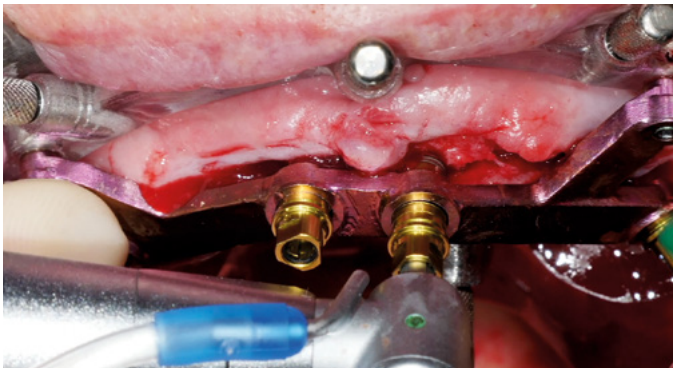

Fig. 7: Guided implant placement in the upper jaw

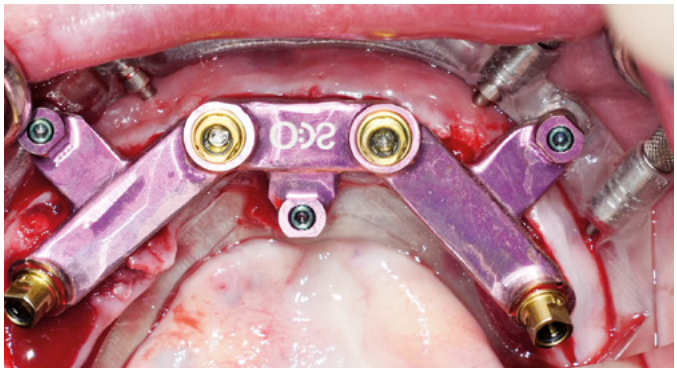

Fig. 8: Guided implant placement in the lower jaw

Fig. 9: Immediate loading

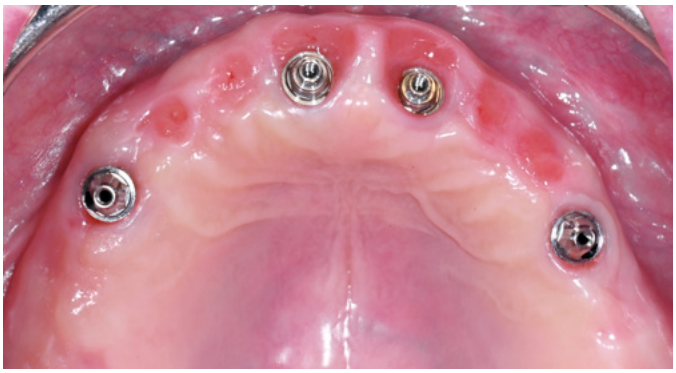

Fig. 10: Multi-unit abutments in the upper jaw

Fig. 11: Multi-unit abutments in the lower jaw

Fig. 12: Final restoration

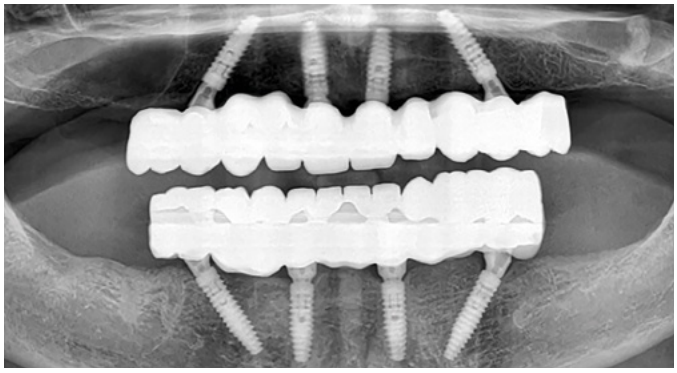

Fig. 13: X-ray control

TAPERED PRO CONICAL.

A MINIMALLY INVASIVE APPROACH TO FULL-ARCH REHABILITATION.

A 54-year-old patient was referred by his GDP for upper jaw rehabilitation. Radiographic examination revealed several teeth affected by a combination of periodontal, endodontic and restorative issues. The patient was seeking a fixed prosthetic solution.

Dr. Tiziano Testori
MD DDS MSc FICD
Studio Tiziano Testori, Como, Italy
Dr. Manuel Nanni
Studio Tiziano Testori, Como, Italy
Luca Dondi
MDT

TREATMENT TIME
90 minutes (surgical procedure)

TOOTH NUMBERS
16–26

TREATMENT TYPE
Full-arch rehabilitation with a screw-retained restoration.

PRODUCTS USED
- **Tapered Pro Conical implant**
- **Striate+™ collagen membrane**

INITIAL PRESENTATION
A 54-year-old patient was referred by his GDP for upper jaw rehabilitation. Radiographic examination revealed several teeth affected by a combination of periodontal, endodontic and restorative issues. The patient was seeking a fixed prosthetic solution.

TREATMENT PLANNING AND DIAGNOSIS
Upon radiographic assessment, teeth 15 to 26 were deemed hopeless, while teeth 17 and 27 were considered maintainable in the provisional phase of treatment to preserve the baseline vertical occlusal dimension. The preliminary analysis did not indicate the need for prosthetic corrections of the occlusal plane or skeletal class.
A digital workflow was employed to plan for the guided surgery of six implants. Several different sizes were required in order to account for the local anatomy at each site. These included a 3.8 mm x 9 mm implant in the 16 area, 4.2 mm x 12 mm in the 14 area, 3.8 mm x 15 mm in the 12 and 22 areas, 4.2 mm x 15 mm in the 24 area and 3.8 mm x 12 mm in the 26 area. Three stackable guides were manufactured, as was the temporary prosthesis to enable immediate loading on the day of surgery.

THE SURGERY AND INITIAL OUTCOMES
Conscious sedation was administrated for surgery. The base guide was positioned in the mouth using the remaining teeth and anchored with five pins (three on the buccal side and two on the palatal). All teeth but the 17 and 27 were extracted atraumatically. The second-stage guide was then placed ready for guided implant placement. A minimally invasive flap was raised in the 16 region. All six Tapered Pro Conical implants were placed as per the digital plan, achieving adequate primary stability with an insertion torque of > 50 Ncm. Straight multi-unit abutments (MUAs) were screwed to each implant. Guided bone regeneration was performed in the 15–16 area, using an autogenous bone graft that was secured with a Striate+™ resorbable collagen membrane. The flaps were sutured closed tension-free.
The third stackable guide was then used to stabilise the temporary restoration. Self-adhesive resin cement was used to bond the temporary cylinders, and the restorations were screwed-in.

BENEFITS OF CHOSEN SOLUTIONS
I chose the Tapered Pro Conical implants because their macro-geometry allows for optimal primary stability, which is essential for immediate loading. The conical connection is also extremely efficient.
In addition, the Striate+™ membrane was ideal for this case due to its handling properties, which make it the most user-friendly membrane on the market that I have ever used. It also produces excellent clinical results.

MAIN CLINICAL OUTCOMES AND CONCLUSION
The patient's post-operative and healing experience was uneventful and he was delighted with the results achieved.
Guided surgery improves the accuracy of prosthetically-driven implant placement. The stackable guides make it possible to manage both the surgical and prosthetic aspects of treatment, supporting seamless delivery of the temporary restoration on the day of surgery for increased patient comfort. The static guides also reduce the need for full-flap surgery, creating the potential for less invasive treatment and shorter operating times.

Fig. 1a: Pre-operative smile

Fig. 1b: Pre-operative situation Intraoral view

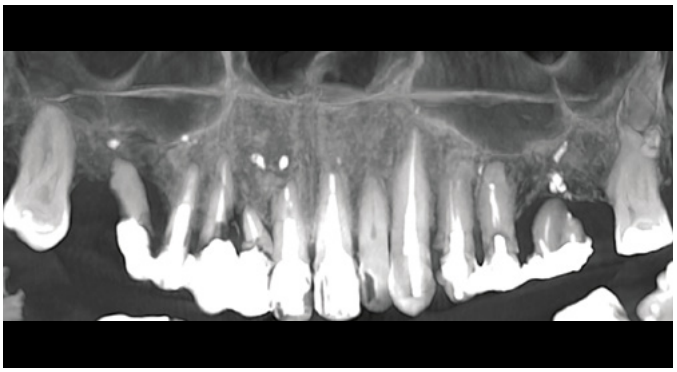

Fig. 2: Pre-operative radiograph

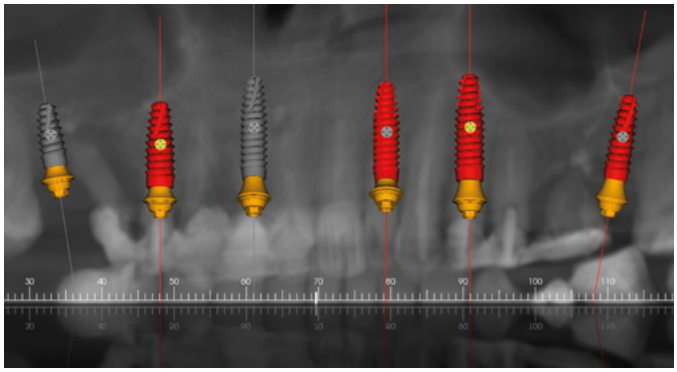

Fig. 3a: Digital implant planning

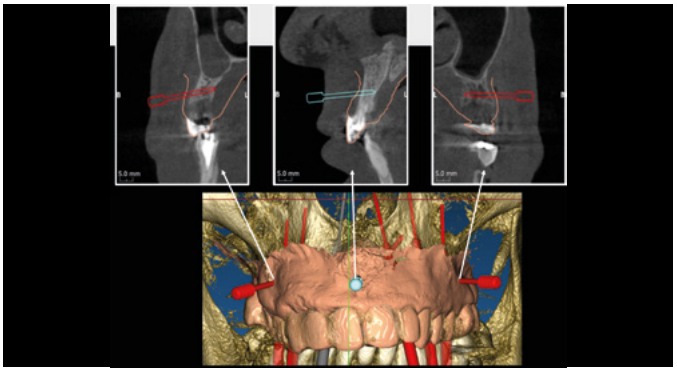

Fig. 3b: Digital implant planning

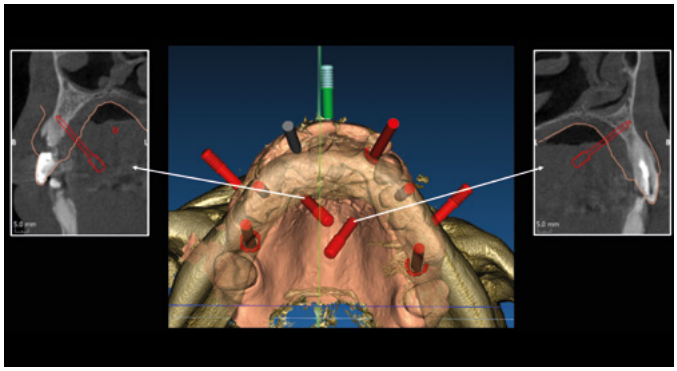

Fig. 3c: Digital implant planning

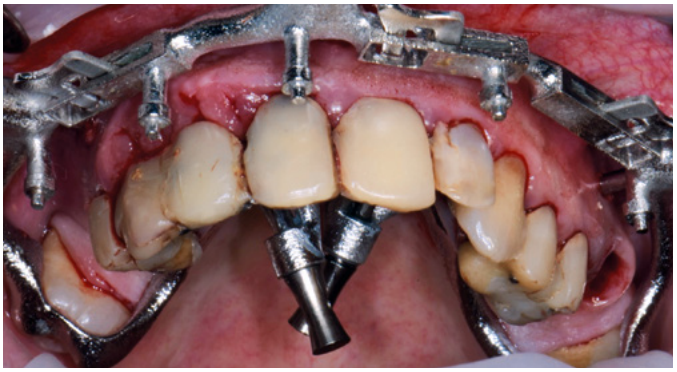

Fig. 4: Base guide secured in position with pins

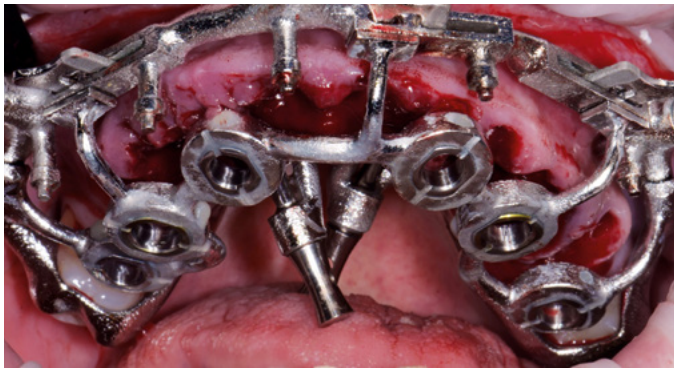

Fig. 5: Fixation of base and first stackable guide following extractions

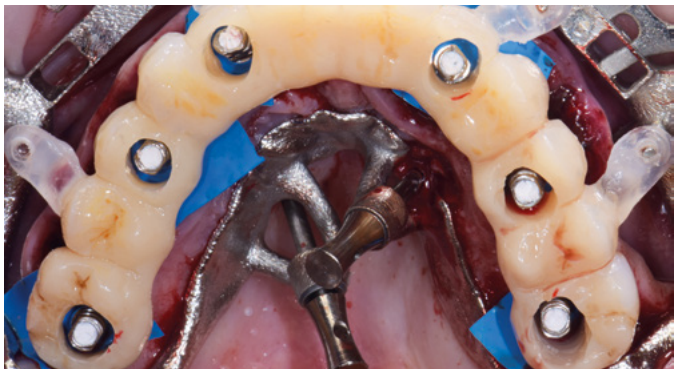

Fig. 6: Stabilisation of the temporary restoration on titanium cylinders screwed on MUAs

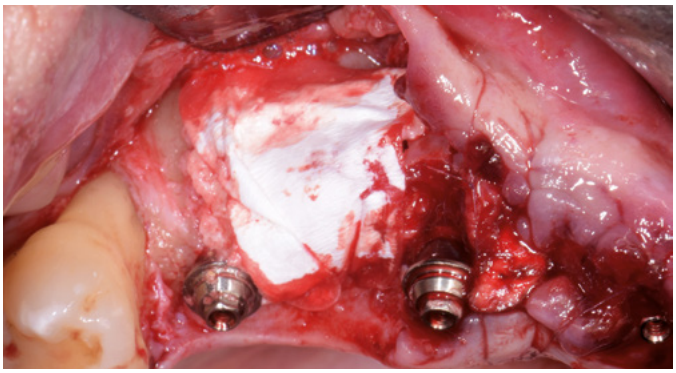

Fig. 7: GBR secured with a Striate+™ membrane

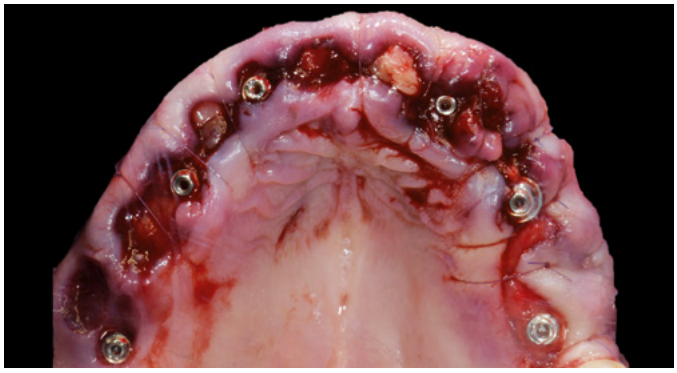

Fig. 8: Implants placed and site sutured closed

Fig. 9: Temporary prosthesis immediately loaded

Fig. 10a: Final restoration

Fig. 10b: Final result

Fig. 11a: PMMA Provisionals in the lower jaw

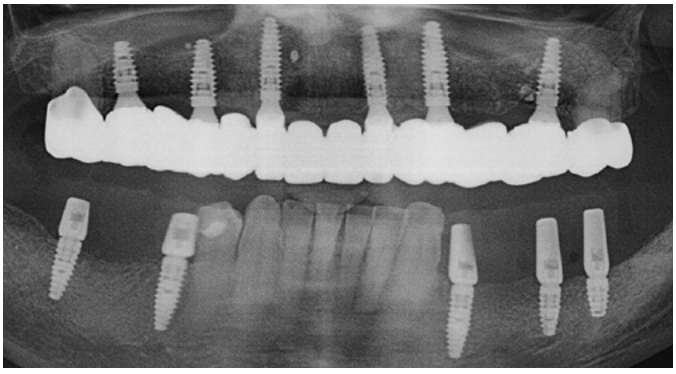

Fig. 11b: Post-operative radiograph

CONELOG® PROGRESSIVE-LINE.

AN EXTREME TRANSFORMATION – IMMEDIACY IN A COMPLEX SITUATION.

The patient presented with failing upper central incisors. A playground accident when she was 8 years old had resulted in the chipping of these two teeth. Over the years, she underwent multiple treatments for her two front teeth, including endodontics, crowns and apicectomies. The patient's routine dentist advised there was nothing more to do but extract, so she self-referred, looking to discuss restorative options. On examination, the prognosis for the UR1 was found to be uncertain, and the prognosis for UL1 was poor.

Dr. Nick Fahey
Woodborough House Dental Practise,
Pangbourne,
Reading,
United Kingdom

TREATMENT TIME
26 weeks total

TOOTH NUMBERS
Upper Right Central Incisor (UR1), Upper Left Central Incisor (UL1)

TREATMENT TYPE
Replacement of the two central incisors. Consisting of an immediate implant placement, soft tissue grafting and immediate loading (UR1) and an early placement, with guided bone regeneration, soft tissue grafting and immediate loading (UL1)

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implants**
- **Striate+™ collagen membrane**
- **IntraSpin® L-PRF**

INITIAL PRESENTATION
The patient presented with failing upper central incisors. A playground accident when she was 8 years old had resulted in the chipping of these two teeth. Over the years, she underwent multiple treatments for her two front teeth, including endodontics, crowns and apicectomies. The patient's routine dentist advised there was nothing more to do but extract, so she self-referred, looking to discuss restorative options. On examination, the prognosis for the UR1 was found to be uncertain, and the prognosis for UL1 was poor.

TREATMENT PLANNING AND DIAGNOSIS
Due to acute infection, the UL1 required immediate extraction, which was performed. The UR1 crown was also removed, and a provisional bridge was fabricated – the aforementioned infection indicated an early implant placement protocol for the UL1.

Eight weeks later, a CBCT scan was taken for digitally planning the implant placement of the UL1. This CBCT confirmed the dubious prognosis of the UR1. Upon discussion, the patient elected to have this tooth extracted. A treatment plan was formulated where an immediate implant was planned for the UR1, while guided bone regeneration (GBR) and implant placement were indicated for the UL1. Both implants would require soft tissue grafting and be immediately loaded. A guided surgical approach was chosen as part of the fully digital workflow to increase the accuracy of implant placement and aid in the use of prefabricated laboratory-made provisional restorations.

THE SURGERY AND INITIAL OUTCOMES
A split-to-full-thickness muco-gingival flap was raised from the 15 to the 25, with papilla-sparing incisions and no relieving incisions. The UR1 was extracted atraumatically, and the socket was thoroughly debrided, including disinfection with a three-minute application of chlorine dioxide gel. The socket epithelium was also removed with a diamond bur in preparation for the connective tissue graft.

The osteotomy was performed through a static guide, with slow drilling of < 50 RPM to allow harvest of autogenous bone. This was combined with L-PRF membrane cut into small pieces and PRF liquid to create sticky bone. Two Ø 3.8 mm x 16 mm CONELOG® PROGRESSIVE-LINE implants were placed through the guide, ensuring that the orientation marks on the implants aligned with the grooves on the guide to facilitate efficient restoration with the screw-retained, pre-made laboratory milled PMMA provisional crowns.

The previously prepared graft material was packed around the implant with a Degidi plugger, with further material added to the dehiscence associated with the UL1. This was covered with a Striate+™ collagen membrane.

A connective tissue graft (CTG) was placed under the buccal aspect of the flap, with some of the CTG positioned in the region of the de-epithelialised sulcus of the UR1, which was then mobilised for tension-free closure. PRF membranes were placed over the site to support the tissue and bone grafts, all of which were stabilised by careful suturing, including sling sutures around the laboratory-made PMMA provisional crowns.

BENEFITS OF CHOSEN SOLUTIONS

The CONELOG® PROGRESSIVE-LINE implants are excellent for immediate loading — they provide a very stable, easy-to-use connection and feature a geometry that facilitates high primary stability. They also integrate very successfully, and I find that I produce better results in these indications with these implants compared to other available products — I appreciate the keyless guided surgery kit for its simplicity. In addition, I prefer a deep conical connection, and this system gives me that. Another huge benefit with using the system as I have described is that, if necessary, I can step up to a Ø 4.3 mm implant should I find poor bone quality or a lack of primary stability with the Ø 3.8 mm implant, with the same guide and components still being viable.

MAIN CLINICAL OUTCOMES AND CONCLUSION

The patient returned to the practice one week later for the removal of the sutures. Upon assessment, the site showed satisfactory healing. The final crowns were provided approximately 14 weeks post-surgery.
This was a fairly extreme case, with a high smile line, a demanding patient and some challenging clinical conditions relating to previous trauma, apical surgery and long-standing infection. By following a systematic process with virtual planning and the use of immediate implant placement and prefabricated provisional restorations, it was possible to deliver an excellent result. A huge benefit for the patient was that at all times during her treatment, she had a fixed restoration. Effectively, she came in with teeth and always left with teeth.

CONELOG® PROGRESSIVE-LINE.
AN EXTREME TRANSFORMATION — IMMEDIACY IN A COMPLEX SITUATION.

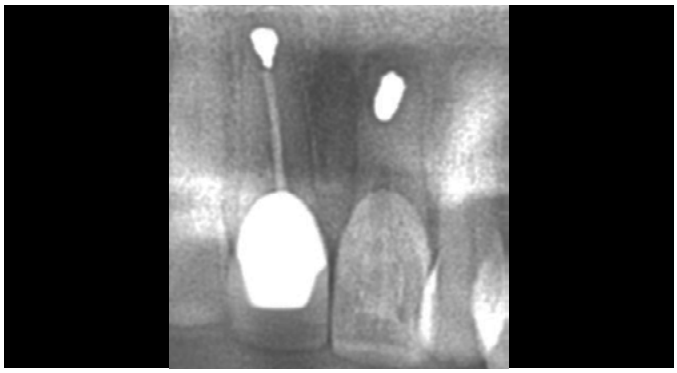

Fig. 1: Radiograph received from referring GDP

Fig. 2: Patient presentation

Fig. 3: UL1 was extracted and a provisional bridge provided

Fig. 4: Sufficient soft tissue volume maintained

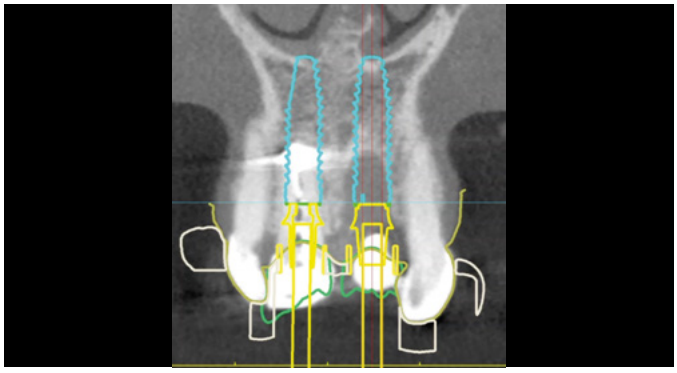

Fig. 5a: Digital planning of the proposed implant placement

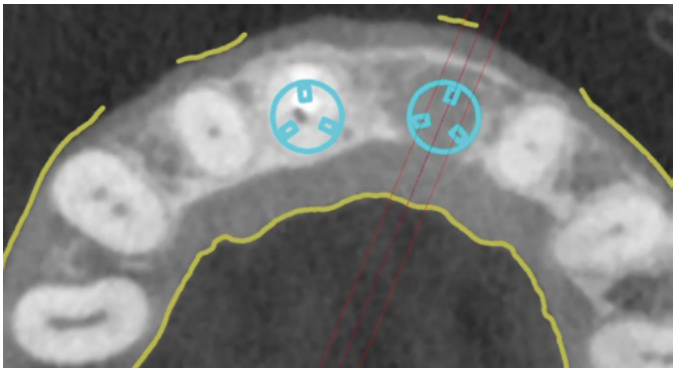

Fig. 5b: Digital planning of the proposed implant placement

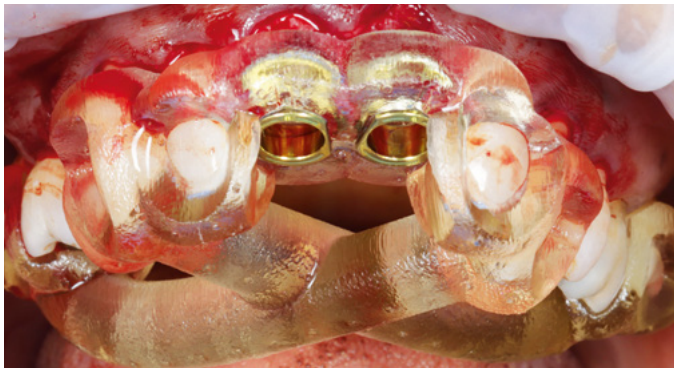

Fig. 6: Surgical guide placed to facilitate accuracy of implant placement

Fig. 7: Implants placed with orientation marks correctly aligned

Fig. 8: Implants placed showing bony dehiscence

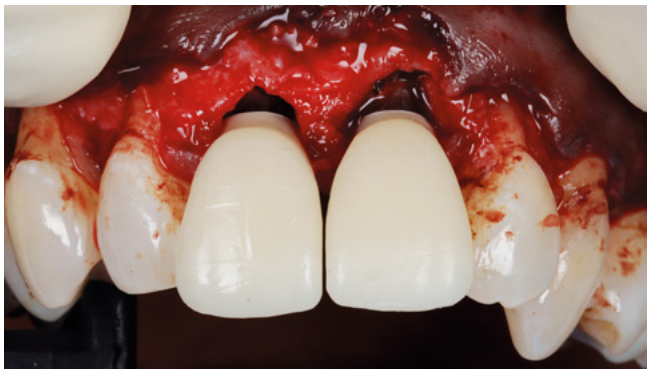

Fig. 9: Temporaries fitted, bony defect visible

Fig. 10: Hard and soft tissue grafting performed

Fig. 11: Surgical site closed tension-free

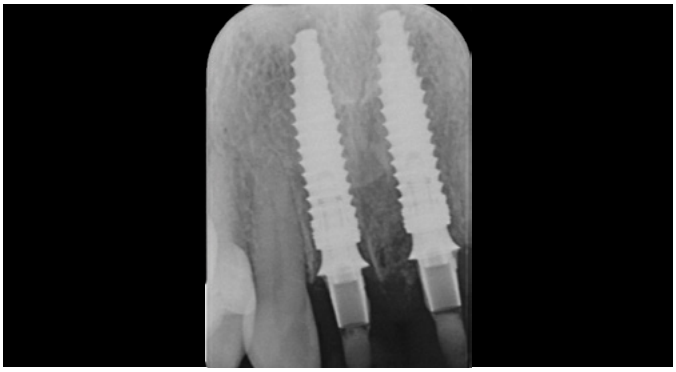

Fig. 12: One-week post-operative radiograph

Fig. 13: 12 weeks post healing

Fig. 14a: Final crowns delivered

Fig. 14b: Final radiographs

CONELOG® PROGRESSIVE-LINE.

IMMEDIATE PLACEMENT AND LOADING WITH A FULLY GUIDED WORKFLOW.

A patient presented with a fractured 23. Given the hopeless prognosis for the tooth, they were referred for an implant replacement and restoration. A full medical, dental and social history revealed nothing of concern and oral hygiene was good.

Dr. Nik Vourakis
Cherrybank Dental,
Edinburgh,
United Kingdom

TREATMENT TIME
Three months

TOOTH NUMBERS
23

TREATMENT TYPE
Immediate implant placement and loading with bone augmentation

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implant**
- **MinerOss® allograft**
- **Striate+™ collagen membrane**

INITIAL PRESENTATION
A patient presented with a fractured 23. Given the hopeless prognosis for the tooth, they were referred for an implant replacement and restoration. A full medical, dental and social history revealed nothing of concern and oral hygiene was good.

TREATMENT PLANNING AND DIAGNOSIS
Clinical photographs and a CBCT scan were taken as part of the comprehensive assessment. A fully digital workflow was utilised to plan the ideal 3D implant position with a prosthetically-driven approach. The plan was to place a 4.3 mm x 13 mm CONELOG® PROGRESSIVE-LINE implant with a sleeve height of 7.5 mm. This was shared and discussed with the patient to obtain informed consent.

THE SURGERY AND INITIAL OUTCOMES
The 23 was extracted causing minimal trauma to the surrounding hard and soft tissue, revealing a buccal bone defect. A buccal flap was raised up to the mucogingival line without any vertical incisions. The surgical guide was placed in the mouth and the implant was placed through it according to the plan.
A combination of autogenous bone chips harvested during the drilling process and MinerOss® allograft was placed around the implant. This was secured and protected by a Striate+™ collagen resorbable membrane, which was placed buccally around the site.
A 1 mm thickness of connective tissue was also harvested from the patient's hard palate and fixed to the inside of the buccal flap with 6.0 resorbable sutures horizontally extending from the base of the mesial to the base of the distal papilla.
The temporary restoration was fabricated chairside using the crown of the fractured tooth with composite and a temporary titanium abutment. This was fitted to the implant on the same day, left out of static and dynamic occlusion. A sling suture was used to coronally advance and seal the soft tissue around the provisional restoration.

BENEFITS OF CHOSEN SOLUTIONS
The CONELOG® PROGRESSIVE-LINE implants feature an optimal thread design and tapered figure, promoting high primary stability — which is essential in full arch reconstruction cases. As such, they support both functional and aesthetic outcomes, helping the clinician to minimise potential complications when implementing immediate protocols.

MAIN CLINICAL OUTCOMES AND CONCLUSION
The site was healing well by the three-week review and suture removal. After 12 weeks, the final restoration — a zirconia layered crown — was provided. The patient was delighted with the result achieved. This case is an excellent example of how immediate protocols, especially when combined with meticulous planning and fully digital workflow, facilitate the delivery of efficient restorative procedures for a range of patients.

Fig. 1: Patient presentation

Fig. 2: Fractured 23

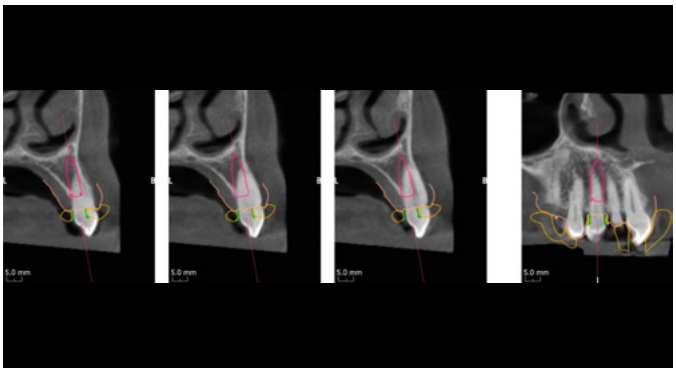

Fig. 3: Digital imaging and planning for prosthetically-driven implant position

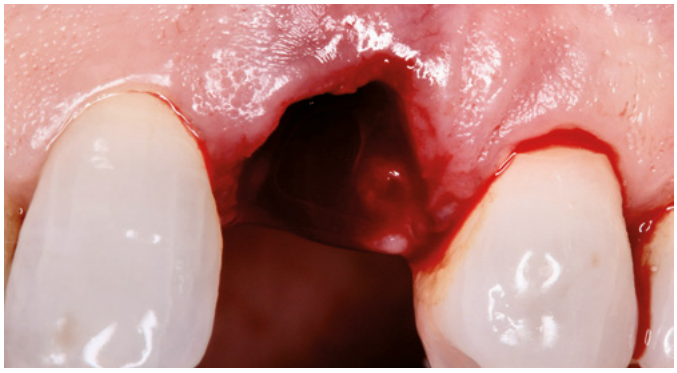

Fig. 4: Atraumatic extraction of the 23

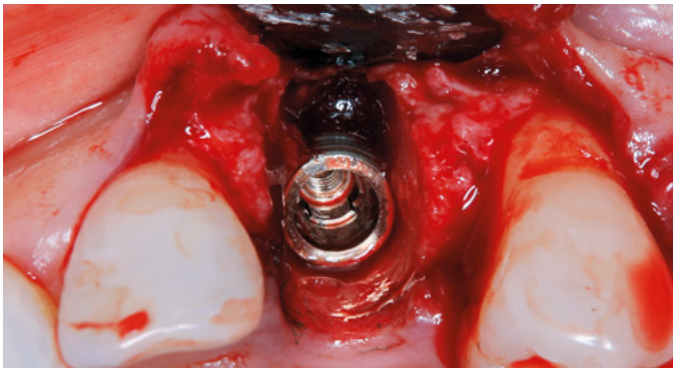

Fig. 5: 4.3 mm CONELOG® PROGRESSIVE-LINE implant placed in ideal 3D position

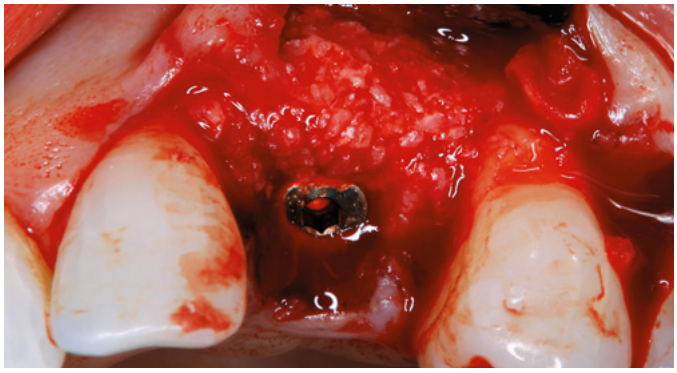

Fig. 6: Autogenous bone chips and MinerOss® allograft combined and placed around the implant

Fig. 7: Striate+™ collagen resorbable membrane placed to secure the graft

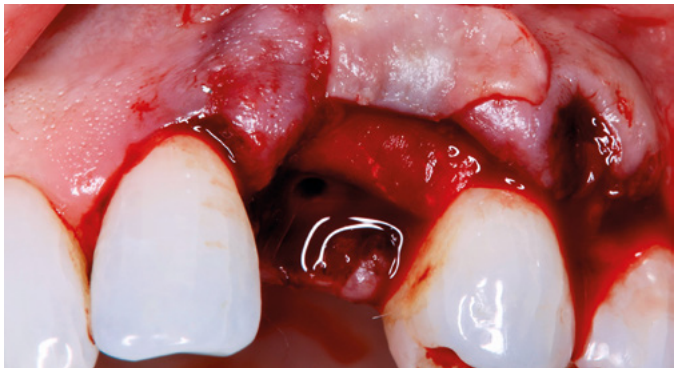

Fig. 8: Connective tissue graft placed over the buccal defect

Fig. 9: Provisional crown design

Fig. 10: Temporary restoration fabricated chairside and fitted

Fig. 11: Three weeks post-operative healing

Fig. 12a: 12 weeks post-operative healing

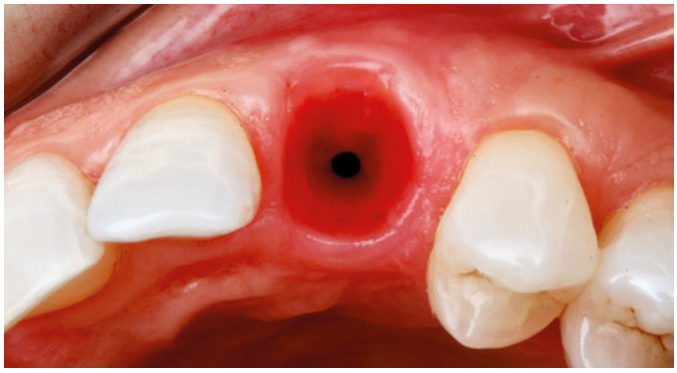

Fig. 12b: 12 weeks post-operative healing occlusal view

Fig. 13: Final crown design

Fig. 14a: Final restoration fitted

Fig. 14b: Final restoration fitted buccal view

Fig. 15: Post-treatment radiograph with final restoration in situ

Fig. 16: One-year follow-up

TAPERED PRO CONICAL.

RESTORING SMILES WITH CONFIDENCE IN IMPLANT STABILITY AND AESTHETICS.

A 61-year-old female patient presented with a failing, upper 3-3, metal ceramic bridge, connected to the canines and lateral incisors on either side. The bridge had failed with caries and core fractures on both abutment teeth on the patient's left side. A solution was sought without the use of a removable prosthesis at any point.

Dr. Omar Iqbal
Complete Dental Care,
Glasgow,
United Kingdom

TREATMENT TIME
3 months

TOOTH NUMBERS
11 and 23 implant sites, 21 and 22 bridge pontic sites

TREATMENT TYPE
Immediate implant placement to support a 4-unit anterior bridge.

PRODUCTS USED
- **Tapered Pro Conical implant**
- **MinerOss® X**

INITIAL PRESENTATION
A 61-year-old female patient presented with a failing, upper 3-3, metal ceramic bridge, connected to the canines and lateral incisors on either side. The bridge had failed with caries and core fractures on both abutment teeth on the patient's left side. A solution was sought without the use of a removable prosthesis at any point.

TREATMENT PLANNING AND DIAGNOSIS
Clinical photographs were taken to assess the aesthetics, with x-rays to better understand the damage to the remaining teeth. A CT scan was also required to assess the existing bone volume. It was challenging to assess the level of damage to the teeth under the metal ceramic bridge, due to obstructed x-rays. As such, it was not possible to confidently diagnose the UR2.

This case required extraction of the UL2 and 3, which were carious and unrestorable, and the UR2 would be assessed following bridge removal. An implant-retained prosthesis would be provided, and a guided approach was implemented to ensure a more predictable treatment process. An immediate implant was planned at the UL3 site. Both hard and soft tissue augmentation were also indicated, as with all immediate implant placement in fresh extraction sockets provided by the author.

A second implant would be placed in the UR1 location to support a 4-unit bridge.

THE SURGERY AND INITIAL OUTCOMES
The bridge was sectioned and carefully removed in pieces, avoiding any damage to the teeth being kept on the right-hand side. The UR2 was assessed and deemed unrestorable. The UR2, UL2 and 3 were then extracted as atraumatically as possible.

A miniflap was raised in the upper central region and the surgical guide placed. Two 3.3 mm diameter Tapered Pro Conical implants were placed through the guide at the pre-determined positions, angles and depths. Both implants achieved an insertion torque above 30 Ncm.

Bone grafting was then performed, placing MinerOss® X into the extraction sockets and the jump gap around the implant in the UL3 socket. This would help to minimise changes in the bone post-surgery and maintain the buccal profile of the ridge.

A soft tissue graft was then performed, harvesting connective tissue from the palate and placing it in the sulcus of the UL3.

Non-engaging cylinders were placed onto the implants to connect to the pre-fabricated temporary bridge. A premade temporary bridge was connected, contoured and polished, with particular attention paid to the contour of the restoration and suturing with the aim of prosthetically guided soft tissue healing.

BENEFITS OF CHOSEN SOLUTIONS
The Tapered Pro Conical implants were selected for this case because they integrate the best features of BioHorizons' Tapered Pro and Camlog's PROGRESSIVE-LINE implants. The conical connection of the Tapered Pro Conical implants boasts a 13-year heritage and has demonstrated evidence of high-precision manufacturing and superior positional stability compared to other conical connections. This new conical connection provides confidence that an optimal emergence profile will be achieved with the restoration, which is crucial when working in the aesthetic zone.

MAIN CLINICAL OUTCOMES AND CONCLUSION

During the two-week review, successful and otherwise uneventful healing was confirmed. After a healing period of three months, the patient returned for the final prosthesis. Good soft tissue adaptation was noted around the temporary prosthesis and the buccal contour was successfully maintained.

Upon professional reflection, the guided approach helped to ensure the precise positioning of the implants. This, alongside the implant selection, was crucial for maximising on the limited bone available for primary stability.

TAPERED PRO CONICAL.
RESTORING SMILES WITH CONFIDENCE IN IMPLANT STABILITY AND AESTHETICS.

Fig. 1: Presenting smile

Fig. 2: Presenting smile retracted view

Fig. 3: Upper occlusal view

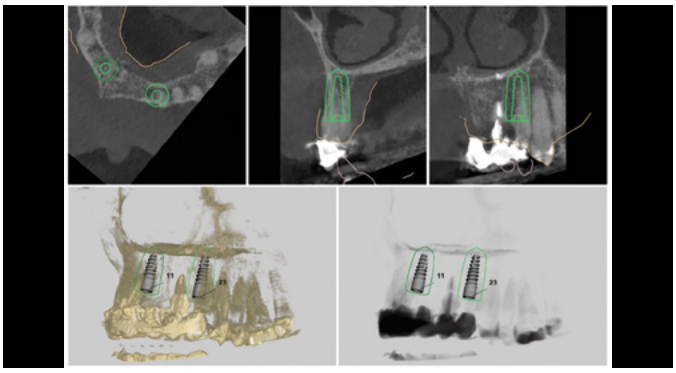

Fig. 4a: Digital planning for implant placement at UL3 site

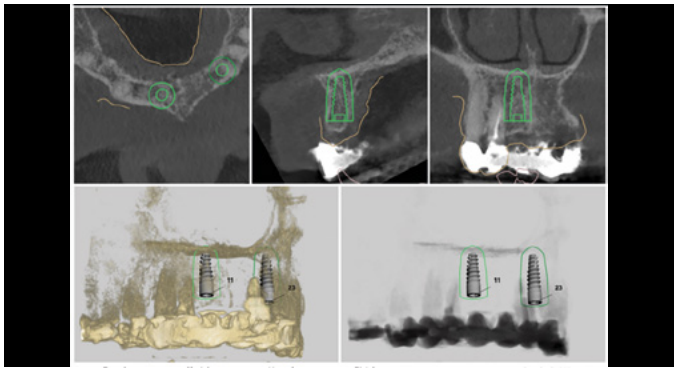

Fig. 4b: Digital planning for implant placement at UR1 site

Fig. 5: Atraumatic extraction of the failling teeth

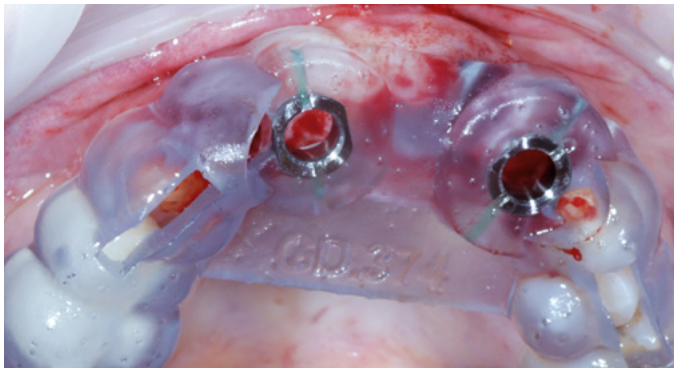

Fig. 6: Surgical guide in place

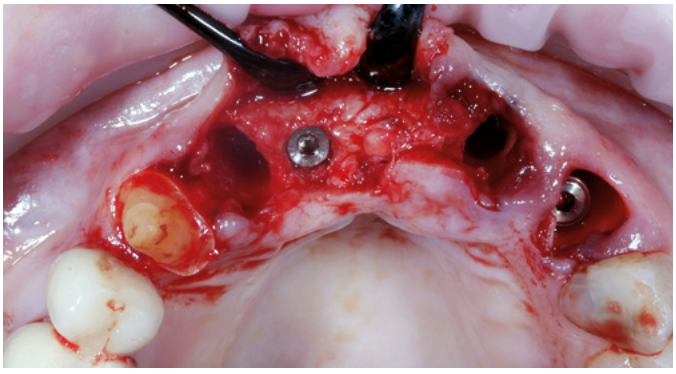

Fig. 7: Implants placed at UR1 and UL3 as per the digital plan

Fig. 8: Soft tissue sutured closed without tension and temporary bridge in place

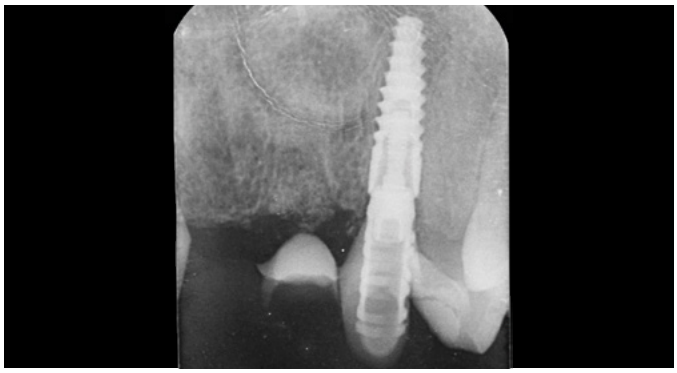

Fig. 9: Post-operative radiograph of implant at the UL3 site

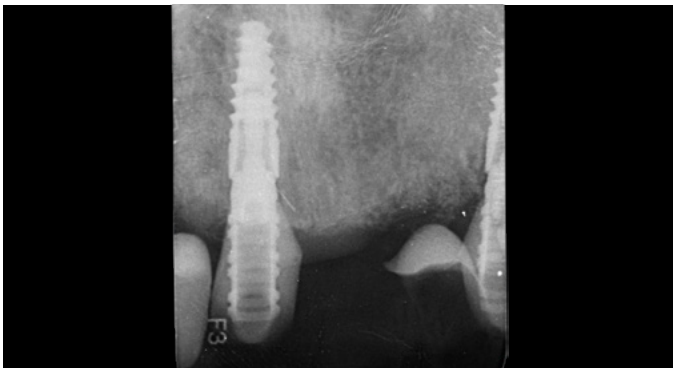

Fig. 10: Post-operative radiograph of implant showing implant at the UR1 site

Fig. 11: 3 months post-operative review shows good soft tissue adaptation

Fig. 12a: Temporary prothesis removed at 3 months post-operative

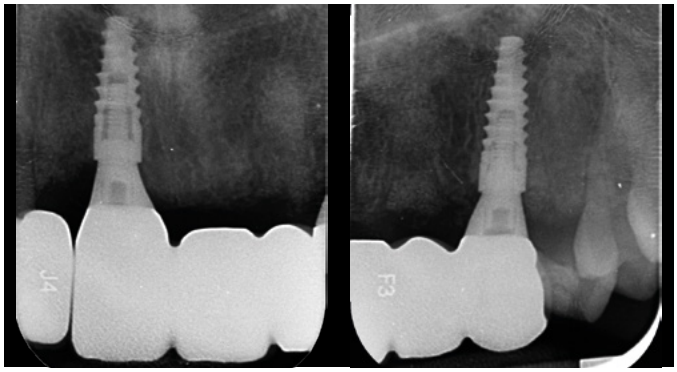

Fig. 12b: Radiograph showing final restoration

Fig. 13: Completed treatment

CONELOG® PROGRESSIVE-LINE.

ANTERIOR IMMEDIATE IMPLANT WITH SIMULTANEOUS AUGMENTATION.

A 58-year-old female patient presented to improve the aesthetics and function of her dentition. Tooth 24 had a root-filled retained root and required extraction. The patient was keen to avoid delayed implant placement in this site due to the predicted treatment time and expense.

Dr. Viraj Patel
Smile Cliniq,
London,
United Kingdom

TREATMENT TIME
Three months

TOOTH NUMBERS
24 (immediate implant), 25 (delayed implant)

TREATMENT TYPE
Anterior immediate implant

PRODUCTS USED
- **CONELOG® PROGRESSIVE-LINE implants**
- **MinerOss® Blend**

INITIAL PRESENTATION
A 58-year-old female patient presented to improve the aesthetics and function of her dentition. Tooth 24 had a root-filled retained root and required extraction. The patient was keen to avoid delayed implant placement in this site due to the predicted treatment time and expense.

TREATMENT PLANNING AND DIAGNOSIS
A comprehensive clinical assessment revealed the patient was fit and healthy, was taking no medication, and maintained fair oral hygiene. Tooth wear was noted on the 23 and 26.

Approximately 15 mm of space was available between the distal of the 23 and mesial of the 26, requiring high placement accuracy and indicating guided surgery. Treatment was, therefore, prosthetically-driven and planned using digital software to determine the ideal implant positions. A CBCT and intraoral scans were taken and uploaded to the SMOP portal to design and 3D print the surgical guide.

THE SURGERY AND INITIAL OUTCOMES
The 24 root was atraumatically extracted, sectioning in a mesial-distal direction to separate the buccal and palatal roots, reducing the risk of fracture and preserving the interdental and surrounding bone.

A flap was raised in the 24/25 region using a paracrestal incision — vertical incisions were avoided to preserve blood supply to the gingiva, protecting the papilla between for optimal soft tissue outcomes. The surgical guide was placed and the manufacturer's specific drilling sequence followed, increasing the osteotomy in size incrementally.

A 3.8 mm x 11 mm CONELOG® PROGRESSIVE-LINE implant was immediately placed through the guide in the 24 site. It was positioned in the palatal root to ensure good engagement with the bone and better bone-to-implant contact. A 5–6 mm jump gap was noted between the implant 24 and buccal plate, this was grafted using MinerOss® Blend particulate graft material to support the remodelling of the site. A second CONELOG® PROGRESSIVE-LINE implant was placed in the 25 position and due to the thin buccal plate, which if left could lead to long-term functional and aesthetic complications, the decision was made to contour augment this site using MinerOss® Blend and a collagen membrane (stabilised with resorbable sutures). The custom healing abutment was placed for the 24 site (torqued to 10 Ncm) and a cover screw was used to seal the 25 implant. The wound was then approximated and sutured, with an X-ray taken post-operatively to confirm correct seating of components and the position of the implants.

BENEFITS OF CHOSEN PRODUCTS
MinerOss® Blend provides a good combination of cortical and cancellous bone for efficient bone turnover. It also maintains graft stability in the healing phase.

The CONELOG® PROGRESSIVE-LINE implant 3.8 mm is my go-to for premolar sites. It's versatile in its clinical application and provides good stability for immediate (and delayed) implant placement protocols. The implant connection is also great — you almost get a cold weld on the conical connection, which affords confidence that custom healing abutments will remain stable during the healing phase.

MAIN CLINICAL OUTCOMES AND CONCLUSION
The custom healing abutment on the 24 supported the ideal emergence profile, making it simple to engage the final restoration and seat it within the already moulded soft tissues, three months post-operatively. Good prosthetic positioning had been achieved for both screw-retained restorations, which were single unit layered zirconia crowns on titanium bases. The patient was delighted with the results.

Fig. 1: Pre-op intraoral image

Fig. 2: Retained root that has been root filled

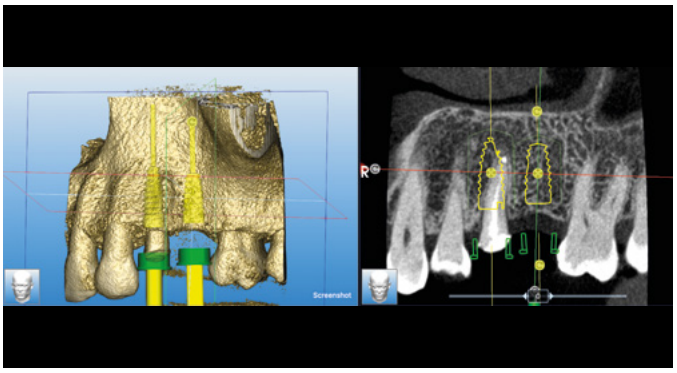

Fig. 3: CT scan and digtial planning for implant placement

Fig. 4: Concavity obvious post extraction

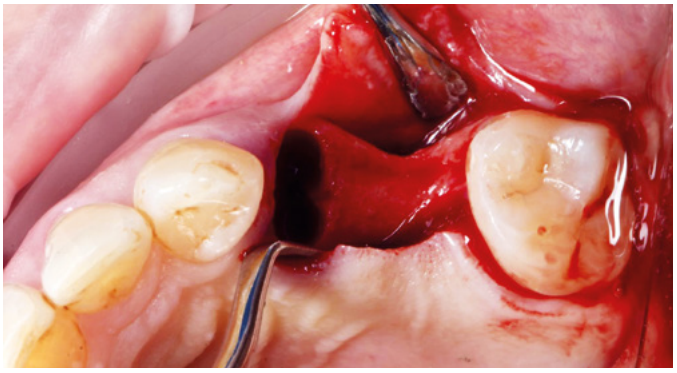

Fig. 5: Flap raised with a paracrestal incision

Fig. 6: Surgical guide fitted in the mouth

Fig. 7: Fully guided implant placement

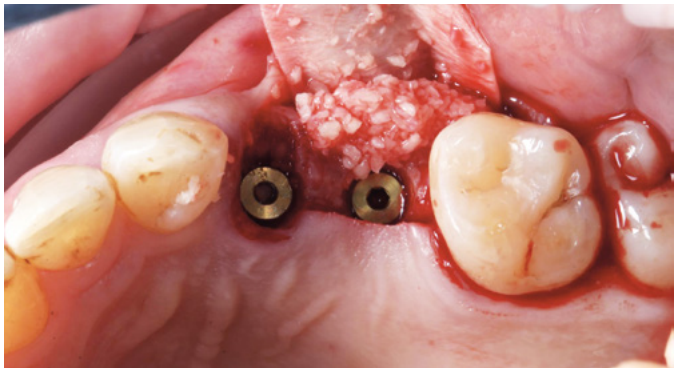

Fig. 8: Contour augmentation UL5 and jump gap grafting UL4

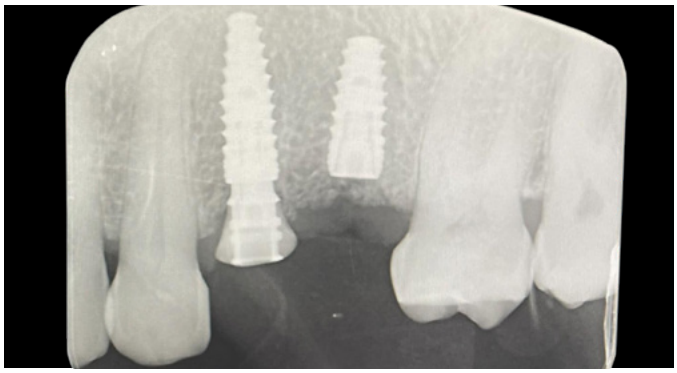

Fig. 9: Custom healing abutment in situ

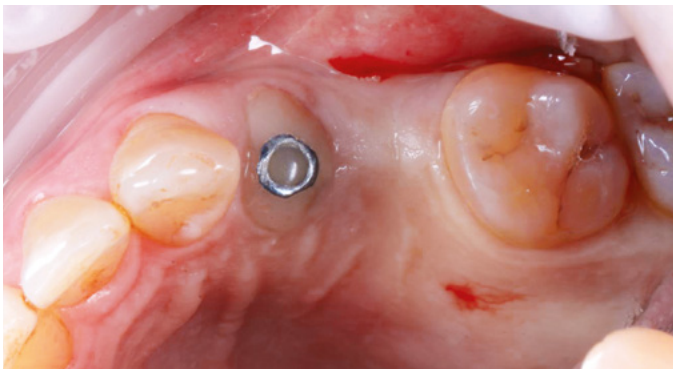

Fig. 10: 3 months after implant placement and GBR

Fig. 11: Screw access holes filled

Fig. 12: Anterior view of the crowns in situ

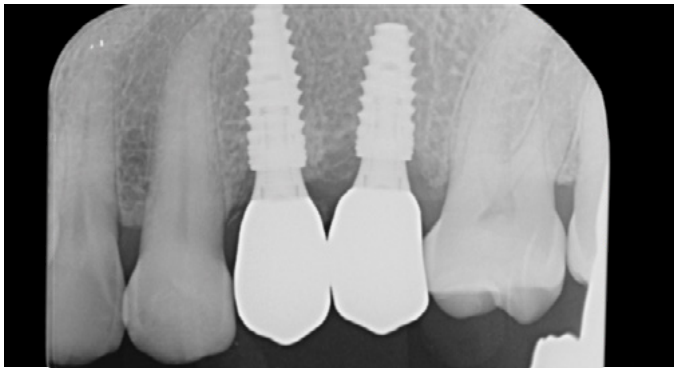

Fig. 13: 6-month radiographic review

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