



# Integrated Restorative and Orthodontic Patient Management in Private Dental Practice: A Narrative Review with Illustrative Cases

Teona Margvelani

Clinical Director, BelaDent, Tbilisi, Georgia.

## Abstract

*Fragmentation of care is a structural feature of private dental practice. A patient who moves between a general dentist, an orthodontist, and a hygienist accumulates handoffs, and each handoff is a point at which responsibility for retention, plaque control, and recall can dissolve. This review describes an operational model built on a single treating clinician who holds both restorative and orthodontic competence and who carries the patient from initial diagnostics through long-term recall. The model is illustrated with 6 cases from a private clinic in Tbilisi, Georgia, treated between 2015 and 2026, and selected to contrast degrees of continuity. In 3 cases where the pathway remained unbroken, outcomes were stable or progressing to plan, including 1 patient whose result held across 4 years of follow-up under a twice-yearly hygiene regimen. In 3 cases where the pathway broke, the consequences were relapse requiring a second course of treatment, displacement of the maxillary anterior teeth after inconsistent retainer wear, and an active phase extended past its planned duration. The contrast identifies continuity as a modifiable determinant of orthodontic stability and suggests that a single clinician with dual competence removes the handoffs at which control is most often lost. Multidisciplinary coordination remains necessary for surgical and implant procedures, with the surgical stage handled by an implant surgeon within the same clinic while the treating clinician retained the coordinating role. The case material is retrospective and illustrative, lacks a control group, and supports a hypothesis for prospective testing.*

**Keywords:** Continuity of Care, Orthodontic Retention, Patient Compliance, Integrated Dental Care, Periodontal Monitoring, Private Practice.

## INTRODUCTION

A private dental practice distributes a single patient across several providers. A general dentist restores, an orthodontist aligns, a hygienist maintains plaque control, and a surgeon extracts. Every transfer between these providers moves information, and every transfer sheds some of it. A retention instruction issued at debonding by one clinician is not reinforced at a recall visit conducted by another. A patient who stops wearing a maxillary appliance tells no one, because no one asks. Two years later, the anterior teeth have drifted, and the record of who was responsible for noticing has evaporated.

Continuity of care names the property that such arrangements

lack. Primary medicine has measured the construct for 2 decades, and the association with outcomes holds across health systems. Bazemore et al. (2023) reviewed peer-reviewed work published between 2002 and 2022 and found that interpersonal continuity with a single clinician tracks with lower costs and reduced use of acute services. Burch et al. (2024) examined studies measuring continuity using patient-reported instruments and found a link between at least one dimension of continuity and at least one health outcome in most of them, while cautioning that this evidence base remains thinner than that built on administrative measures. Dentistry has imported the vocabulary of continuity without importing the measurement.

**Citation:** Teona Margvelani, "Integrated Restorative and Orthodontic Patient Management in Private Dental Practice: A Narrative Review with Illustrative Cases", Universal Library of Medical and Health Sciences, 2026; 4(3): 117-123. DOI: <https://doi.org/10.70315/uloap.ulmhs.2026.0403010>.

The orthodontic literature approaches the same problem from the direction of retention. Martin et al. (2023) synthesized 47 randomized trials with 4,377 participants and concluded that the certainty of evidence favoring any one retention protocol over another remains low to very low. What that conclusion leaves standing is the observation that retention depends on something outside the appliance. Nahajowski et al. (2022) found that patients shorten the prescribed wear time of removable appliances on their own initiative, a behavior that microsensor measurements document with greater consistency than self-report ever does. Adherence is the operative variable, and adherence is a function of who is watching and how often.

Periodontal risk runs alongside. Fixed appliances create plaque-retentive surfaces, and Crego-Ruiz and Jorba-García (2023) documented shifts in periodontal indices during treatment with fixed appliances compared with clear aligners. A review by Cadenas de Llano-Pérula et al. (2023) of 48 articles investigating the incidence of gingival recession (GR) post-orthodontic treatment identified a thin gingival biotype, pre-existing GR and proclined incisors as important risk factors of GR. Fleming and Andrews (2024) argued that the thin periodontal phenotype needs both orthodontic and periodontal input for diagnosis and stabilization, with cooperation between the disciplines. In patients with severe periodontitis, Papageorgiou et al. (2022) reported a clinical attachment gain for sequential therapy in both disciplines.

Coordination is as close as the dental literature comes to naming the problem. Schneider and Moser (2024) noted that without close communication and continuous exchange of information between team members, interdisciplinary treatment collapses into multidisciplinary care, lacking coordination of the individual procedures. Their prescription is a well-orchestrated team of specialists, each holding working knowledge of the adjacent fields. The prescription assumes a team. Most private practices in most markets do not have one.

The present review describes an operational solution developed over 24 years of practice in a single private clinic. The model rests on 1 treating clinician who holds both restorative and orthodontic competence and who carries the patient from initial diagnostics through long-term recall, removing from the pathway the handoffs that coordination is designed to support. To the author's knowledge, this operationalization has not been described in the private-practice literature as a named model. The aim of this article is to set out that model and to illustrate its bearing on outcomes through 6 cases selected to contrast degrees of continuity.

## **MATERIALS AND METHODS**

This work is a narrative review supported by illustrative clinical material. The literature component drew on PubMed, Scopus, and Web of Science for records published in English

between 2021 and 2026. Search terms combined continuity of care, orthodontic retention, relapse, patient compliance, periodontal phenotype, and interdisciplinary dental treatment. Selection favored systematic reviews, meta-analyses, and clinical reviews carried by indexed dental and primary care journals.

The model described organizes patient management into 6 sequential stages, each handled by 1 clinician. The first stage is comprehensive initial diagnostics, covering clinical examination, panoramic and lateral radiography, and assessment of periodontal condition. The second stage is hygiene and periodontal preparation, with professional cleaning and individualized instruction before any appliance is bonded. The third stage is the active orthodontic phase, with adjustments every 4 to 6 weeks, each visit carrying an assessment of plaque control and soft tissue condition alongside the mechanical work. The fourth stage is restorative integration, performed after debonding by the same clinician who conducted the orthodontic phase. The fifth stage is the retention protocol, which combines a bonded retainer with a removable arch-based appliance. The sixth stage is long-term recall, in which professional hygiene and follow-up examination continue at defined intervals.

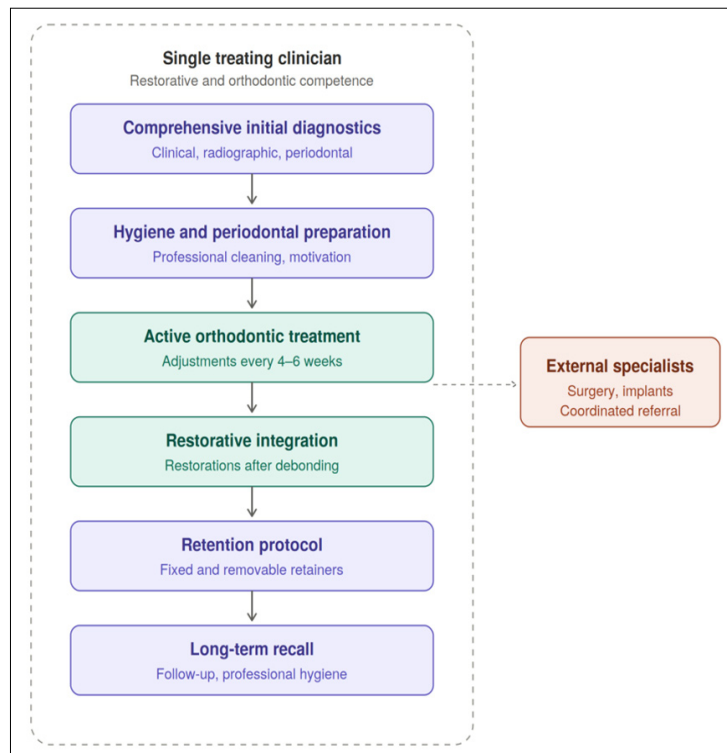
Procedures falling outside the treating clinician's scope are delegated to colleagues within the practice. Surgery and implant placement were performed by an implant surgeon working within the same clinic, while the treating clinician retained diagnostic ownership, sequencing authority, and responsibility for the outcome. Such a delegation hands over a procedure, and the pathway itself does not change hands.

The clinical material comprises 6 cases treated at BelaDent, a private clinic in Tbilisi, Georgia, between 2015 and 2026. Selection from a record set of 19 cases followed 2 criteria: completeness of documentation, and representation of contrasting degrees of continuity. The 6 cases are illustrative and were not drawn as a consecutive series, which means they are outside the logic of statistical inference. Ages at the start of treatment ranged from 13 to 42 years. Five patients were female, and 1 was male.

Oral hygiene and periodontal status are reported descriptively based on clinical assessment at presentation. Numerical indices were withheld as measured outcomes, since the available records did not permit their verification. All patient data were anonymized, no facial images were included, and identifying information was removed from the clinical images.

## **RESULTS**

The pathway the model prescribes is set out in Figure 1. The sequence runs in one direction, from diagnostics to recall, and the boundary around the 6 stages marks the scope of the treating clinician.



**Fig. 1.** The integrated care pathway under a single treating clinician

The 6 cases appear in Table 1, which reports diagnosis, appliance, and duration, the state of continuity across the pathway, and the outcome at the point of last assessment.

**Table 1.** Summary of the 6 illustrative cases

| Case        | Key diagnosis                                                                               | Treatment                                                            | Continuity of care                                                                | Outcome              |
|-------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|
| 1<br>F, 14  | Class II, deep bite, crowding, narrow upper arch. Satisfactory hygiene                      | Expansion plate, then fixed appliance, 24 months                     | Regular adjustments. Retainer loss detected at recall and managed with aligners   | Stable occlusion     |
| 7<br>F, 13  | Class II tendency, distal occlusion, crowding. Satisfactory hygiene                         | Fixed appliance, active phase ongoing                                | Irregular attendance despite repeated guidance                                    | Treatment prolonged  |
| 10<br>F, 28 | Moderate crowding, rotations, arch-form distortion. Satisfactory hygiene                    | Self-ligating appliance, active phase ongoing                        | Preventive protocol from the outset. Hygiene reviewed at every visit              | On track             |
| 13<br>F, 25 | Class III tendency, anterior open bite, crowding, missing teeth. Poor hygiene, gingivitis   | Two orthodontic courses, anterior composite restorations             | Retention non-compliance after the first course. Recommendations followed in part | Relapse, retreatment |
| 14<br>M, 42 | Class I dentoalveolar anomaly, traumatic anterior bite, missing teeth. Poor hygiene, smoker | Self-ligating appliance, 18 months, multidisciplinary rehabilitation | Inconsistent wear of the removable retainer after debonding                       | Minor relapse        |
| 15<br>F, 26 | Severe crowding, rotations, thin periodontal biotype. Satisfactory hygiene                  | Ceramic fixed appliance, extended by pandemic restrictions           | Full retention compliance. Professional hygiene twice a year                      | Stable at 4 years    |

Oral hygiene and periodontal status are reported descriptively, based on clinical assessment at presentation.

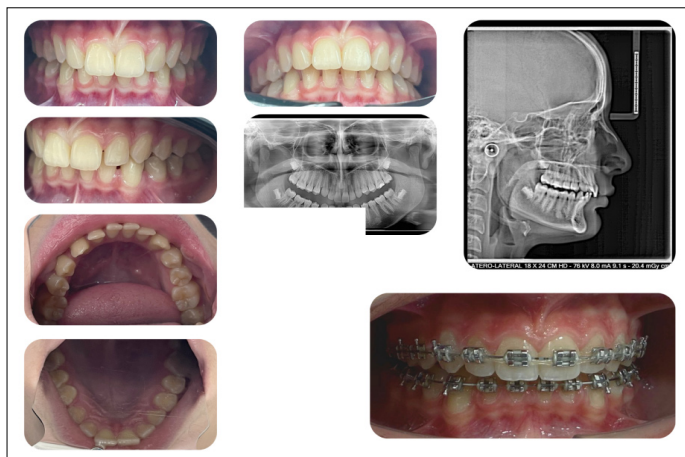
Continuity was maintained in 3 of the 6 cases. Case 15 offers the longest observation. A woman aged 26 presented with severe crowding of both arches, rotation of tooth 37, secondary absence of tooth 36, and a thin periodontal biotype, placing the mandibular anterior region at elevated risk of recession. Treatment used a ceramic ligating appliance, and pandemic restrictions extended the active phase past its planned duration. Periodontal monitoring continued throughout. Four years after debonding, the result holds, with functional occlusion and arch relationships preserved under professional hygiene twice per year. Gingivoplasty of the mandibular anterior region has been recommended, and the patient declines it out of fear of surgery, which has not destabilized the orthodontic result.

The record for this case appears in Figure 2. The disclosing agent applied at a maintenance visit reveals the plaque distribution that the twice-yearly regimen exists to control, and the views taken after treatment show the arch relationships that have held across the 4 years since debonding.



**Fig. 2.** Case 15, female, 26 years. Intraoral status, plaque disclosure at a maintenance visit, and the outcome maintained 4 years after debonding

Case 1 shows the pathway absorbing a failure. A girl of 14 presented with a skeletal Class II tendency arising from mild mandibular retrognathia, distal occlusion, increased overjet, deep incisal overlap, crowding, and a constricted maxillary arch. Cervical vertebral maturation corresponded to stages 3 and 4. Treatment began with a removable expansion plate, followed by a fixed ligating appliance after 3 months. The active phase ran 24 months with adjustments every 4 to 5 weeks. A bonded retainer was placed in the mandibular arch, and a removable appliance was made for the maxilla. The patient lost the maxillary appliance during retention. The loss was identified during a scheduled recall, and treatment was shifted to maxillary aligners without interruption. Occlusal stabilization and the corrected tooth positions remained intact after the incident. This case is documented in Figure 3.



**Fig. 3.** Case 1, female, 14 years. Retainer loss identified at a scheduled recall and managed with maxillary aligners, with occlusal stabilization preserved

Case 10 illustrates the preventive stage operating at the front of the pathway. A woman of 28 presented with moderate crowding of both arches, rotation of the anterior teeth, and distortion of arch form, with skeletal growth complete and treatment aimed at dentoalveolar compensation. Professional hygiene and individualized instruction preceded bonding, which the appliance's plaque-retention risk made a precondition of treatment. A self-ligating appliance was placed in March 2026, ceramic in the maxilla and metal in the mandible. Adjustments proceed at 4 to 6-week intervals, each carrying an assessment of hygiene and soft tissue condition. The active phase continues, and the trajectory matches the plan.

Continuity broke in the remaining 3 cases, and the consequences differ in severity. Case 13 carries the clearest signal. A woman of 25 completed a first course of orthodontic treatment between 2015 and 2017. During retention, she followed neither the wear instructions nor the recall schedule in full, and the result relapsed in part. A second course ran from 2022 to 2023 against a diagnosis that had grown more complex: a skeletal Class III tendency, pronounced anterior open bite, Class III molar relationship, deformation of both arches, sagittal constriction of the maxilla at the premolars, anterior crowding, secondary absence of teeth 14 and 24, and congenital absence of teeth 32 and 42. Hygiene at presentation was poor, with signs of gingivitis. Adjustments were performed every 5 to 6 weeks with periodontal monitoring; composite restorations of the maxillary anterior teeth followed the orthodontic phase; and a bonded mandibular retainer and a removable maxillary appliance were fitted. The recommendations issued at the close of the second course are again partially followed.

Figure 4 documents the presentation preceding that second course. The anterior open bite visible on the intraoral views and the arch deformation confirmed by the panoramic radiograph mark the state to which an unmonitored retention phase returned a completed result.



**Fig. 4.** Case 13, female, 25 years. Status at presentation for the second course of treatment, following partial relapse of the first result

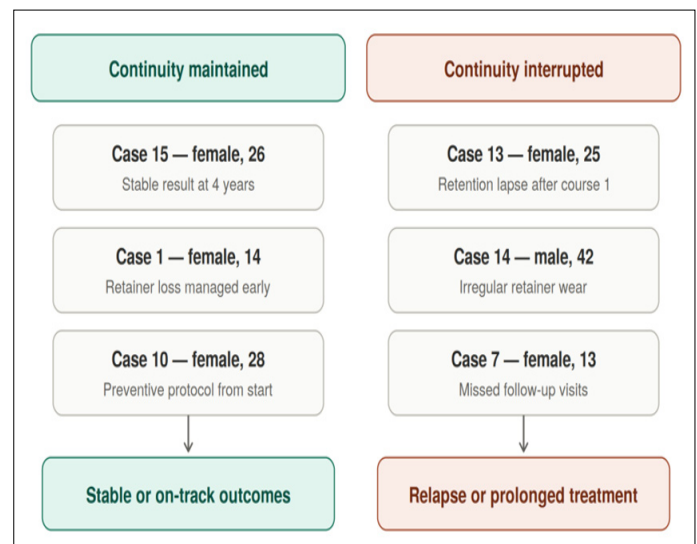
Case 14 shows the same mechanism in an adult carrying an additional risk. A man of 42 presented with a dentoalveolar anomaly on a skeletal Class I base, a traumatic edge-to-edge anterior bite, crowding, congenital absence of tooth 42, secondary absence of teeth 14 and 36, and an existing crown on tooth 15. He smoked, and pigmented plaque accumulated on palatal and lingual surfaces at a rate demanding professional cleaning throughout treatment. The active phase ran from October 2023 to April 2025 with a self-ligating metal appliance. Implant placement was performed by an implant surgeon within the same clinic under the treating clinician's coordination, and prosthetic and restorative work completed the rehabilitation. A bonded retainer was fitted in the mandible. Wear of the removable maxillary appliance was inconsistent, and the maxillary anterior teeth were displaced. Aligner correction is now recommended to stabilize what the retention phase failed to hold. The status and outcome for this case appear in Figure 5.



**Fig. 5.** Case 14, male, 42 years. Intraoral status, plaque disclosure, and the rehabilitation outcome following displacement of the maxillary anterior teeth after inconsistent retainer wear

Case 7 shows the pathway breaking during the active phase. A girl of 13 presented with a skeletal Class II tendency arising from moderate mandibular retrognathia, distal occlusion, a constricted maxillary arch, crowding, buccal position of the maxillary canines, and rotation of individual teeth. Hygiene at presentation was satisfactory. A ligating appliance was bonded in both arches with adjustments planned at 4- to 6-week intervals and periodontal monitoring at each visit. Attendance was irregular. Alignment improved, and the maxillary arch widened, and the active phase has run past its planned duration, with functional and esthetic correction incomplete despite repeated guidance on the visit schedule.

The distribution of these outcomes by pathway state is shown in Figure 6. Cases in which continuity held produced stable results or results progressing to plan. Cases in which continuity broke produced relapse requiring a second course, displacement following inconsistent retainer wear, and an active phase extended past its planned duration.



**Fig. 6.** Continuity of care and treatment outcome across the 6 cases

## DISCUSSION

The contrast across these 6 cases identifies the pathway's continuity as a modifiable determinant of orthodontic stability. Case 15 and case 13 mark the boundary conditions. The first patient kept a 4-year result under a maintenance regimen despite a thin biotype and an active phase disrupted by a pandemic. The second lost a completed result and returned for a second course of treatment. Neither the difficulty of the malocclusion nor the technical quality of the mechanics accounts for the difference between them. What separates the two is whether the pathway stayed intact after the appliance came off.

The mechanism the model proposes is the removal of handoffs. Retention failure is a detection problem before it becomes a mechanical problem. A patient who loses an appliance or stops wearing it produces no symptom, and the signal reaches the clinician only if someone asks at a visit the patient attends. Case 1 makes the point affirmatively. An appliance was lost, the loss surfaced at a scheduled recall, and the response followed within the same pathway. The equivalent event in case 14 produced tooth displacement because the intervals during which nobody asked were long enough for the teeth to move.

This reading aligns with the direction of the retention literature without claiming its evidentiary weight. The low to very low confidence of evidence that one retention protocol is better than another reported by Martin et al. (2023) suggests that behavioral factors may be more important than the retention protocol. Nahajowski et al. (2022), for example, demonstrated that patients intentionally shorten their wear time. Only surveillance remains under clinician control. Bazemore et al. (2023) and Burch et al. (2024) identified continuity-outcome associations at the population level, though these are not generalizable to dentistry, and extrapolation between domains remains a hypothesis.

The periodontal dimension of the model is relevant in cases 13, 14, and 15. Crego-Ruiz and Jorba-García (2023) documented the periodontal indices that shift during fixed appliance treatment, and containing that shift is the work assigned to the second and third stages of the pathway. Case 14, a smoker with heavily pigmented plaque, and case 13, presenting with gingivitis, required monitoring across the whole active phase. Case 15 required different protection. Fleming and Andrews (2024) and Cadenas de Llano-Pérula et al. (2023) identified thin phenotype as a recession risk that dictates planning, and the twice-yearly regimen that the patient maintains is the pathway's answer to that risk in the absence of the gingivoplasty she declines.

The model yields where competence yields. Case 14 required implant placement, a procedure outside the treating clinician's scope, and it was carried out by an implant surgeon within the same clinic. Schneider and Moser (2024) drew the distinction that matters here, since coordinated interdisciplinary treatment and uncoordinated multidisciplinary care differ by the continuity of information between participants. The model preserves that continuity by keeping diagnosis, sequencing, and outcome responsibility with 1 clinician while delegating the procedure. Papageorgiou et al. (2022) demonstrated the periodontal gains available when disciplines are sequenced together, and sequencing requires an owner.

Several limitations bound these conclusions. The case material is retrospective and illustrative, lacks a control group, and is not randomized, which precludes causal inference. All 6 cases come from 1 clinic and 1 clinician, a design that confounds the model with the individual applying it. Hygiene and periodontal status are reported descriptively, since the underlying records did not support their use as measured outcomes. Two cases, 7 and 10, remain in the active phase, so their outcomes are provisional. The model's effect cannot be separated from patients' individual adherence, and the possibility that adherent patients select into continuous pathways remains unaddressed, as does the reverse direction of causation. Observation periods range from months to 4 years, which limits comparison. A prospective cohort design comparing single-clinician pathways against referral-based pathways on retention, adherence, and relapse at 24 months would test the hypothesis these cases generate.

## CONCLUSION

A single treating clinician with both restorative and orthodontic competence eliminates handoffs at which control over retention, plaque, and recall dissolves. Across the 6 cases described here, the pathways that remained intact produced stable or on-track results, whereas those that broke led to relapse, displacement, and an extended active phase. The model is reproducible in private practice, as its requirements

include dual training and a recall system owned by the treating clinician. Multidisciplinary coordination remains necessary where competence ends, and delegating a procedure differs from delegating the patient. The evidence presented here is illustrative and generates a hypothesis for prospective testing under a design with a control group and defined follow-up. These cases support a claim about architecture. Continuity of the pathway is a variable the clinician controls, and orthodontic stability appears to track it.

## REFERENCES

1. Bazemore, A., Merenstein, Z., Handler, L., & Saultz, J. W. (2023). The impact of interpersonal continuity of primary care on health care costs and use: A critical review. *Annals of Family Medicine*, 21(3), 274–279. <https://doi.org/10.1370/afm.2961>
2. Burch, P., Walter, A., Stewart, S., & Bower, P. (2024). Patient reported measures of continuity of care and health outcomes: A systematic review. *BMC Primary Care*, 25, Article 309. <https://doi.org/10.1186/s12875-024-02545-8>
3. Cadenas de Llano-Pérula, M., Castro, A. B., Danneels, M., Schelfhout, A., Teughels, W., & Willems, G. (2023). Risk factors for gingival recessions after orthodontic treatment: A systematic review. *European Journal of Orthodontics*, 45(5), 528–544. <https://doi.org/10.1093/ejo/cjad026>
4. Crego-Ruiz, M., & Jorba-García, A. (2023). Assessment of the periodontal health status and gingival recession during orthodontic treatment with clear aligners and fixed appliances: A systematic review and meta-analysis. *Medicina Oral, Patología Oral y Cirugía Bucal*, 28(4), e330–e340. <https://doi.org/10.4317/medoral.25760>
5. Fleming, P. S., & Andrews, J. (2024). The role of orthodontics in the prevention and management of gingival recession. *British Dental Journal*, 237(5), 341–347. <https://doi.org/10.1038/s41415-024-7781-1>
6. Martin, C., Littlewood, S. J., Millett, D. T., Doubleday, B., Bearn, D., Worthington, H. V., & Limones, A. (2023). Retention procedures for stabilising tooth position after treatment with orthodontic braces. *Cochrane Database of Systematic Reviews*, 2023(5), Article CD002283. <https://doi.org/10.1002/14651858.CD002283.pub5>
7. Nahajowski, M., Lis, J., & Sarul, M. (2022). Orthodontic compliance assessment: A systematic review. *International Dental Journal*, 72(5), 597–606. <https://doi.org/10.1016/j.identj.2022.07.004>
8. Papageorgiou, S. N., Antonoglou, G. N., Michelogiannakis, D., Kakali, L., Eliades, T., & Madianos, P. (2022). Effect of periodontal-orthodontic treatment of teeth with

pathological tooth flaring, drifting, and elongation in patients with severe periodontitis: A systematic review with meta-analysis. *Journal of Clinical Periodontology*, 49(S24), 102–120. <https://doi.org/10.1111/jcpe.13529>

9. Schneider, U. E. M., & Moser, L. (2024). Achieving excellence with interdisciplinary approaches in complex orthodontic adult patients. *British Dental Journal*, 237(5), 349–359. <https://doi.org/10.1038/s41415-024-7778-9>