

THE  
**ORTHODONTIC**  
SPECIALIST ACADEMY



ADVANCED  
ALIGNER TREATMENT  
PLANNING

# ADVANCED ALIGNER TREATMENT PLANNING

## OVERVIEW

Within the realm of interdisciplinary dental treatment, it is widely acknowledged by preeminent dental professionals that orthodontics (ortho) serves as a foundational element for the success of prosthodontic interventions. Renowned experts across various dental disciplines have gone as far as to suggest that orthodontics is transforming the field, with a progressive assertion that “ortho is the new prosthodontics.” This prompts a critical inquiry: Why should we resort to grinding healthy tooth structure and addressing merely the superficial manifestation of dental issues when we are capable of more refined interventions?

Orthodontic treatment offers the opportunity to correct malposition of teeth, aligning them into their optimal positions, thus enhancing functionality and aesthetic outcomes. This approach prompts the reconsideration of traditional methods, particularly in the context of dental recessions. It raises questions regarding the aetiology of these recessions — whether they stem from issues related to bone density, soft tissue thickness, functional habits, or a confluence of these factors and their relationship to the tooth’s positioning within the alveolar bone envelope.

Furthermore, it is imperative to evaluate the potential success of recession coverage without first addressing the repositioning of the tooth into its appropriate alveolar envelope. For dental arches that have adapted to compensate for malposition and wear, a systematic approach must be considered to achieve the most favourable outcomes. This includes a thorough examination of the emergence profile and the cemento-enamel junction (CEJ), assessing the extent to which these factors contribute to the overall stability of the dental structures.

In considering the broader scope of structural, functional, and behavioural factors that impact the airway, we are compelled to deliberate the interplay between stability and these variables. This brings to light a crucial decision-making juncture: whether our treatment focus should be directed at the underlying cause, or the symptoms presented.

The quintessence of effective treatment planning lies in adopting an approach that is comprehensive and systematically prioritized. I have devised a novel protocol that stipulates the following order of considerations: 1. Airway, 2. Aesthetics, 3. Function, 4. Biomechanics, and 5. Periodontics.

Throughout this lecture series, we will examine a variety of case studies that illustrate the limitations of outdated, solely ortho-centric protocols. These examples will elucidate the necessity of an all-encompassing orthodontic treatment strategy that is well-versed in the five pivotal domains.

The lecture aims to expand the horizons of our future treatment planning and to shed light on the predictability of such comprehensive treatment approaches. We are on the cusp of redefining the synergy between orthodontic and prosthodontic care, striving for excellence in both form and function through strategic, interdisciplinary treatment planning.

## SYNOPSIS

This lecture will delve into the increasingly recognized paradigm that positions orthodontics not merely as an adjunct, but as a cornerstone within the spectrum of prosthodontic and comprehensive dental treatments. Esteemed dental professionals globally have been redefining orthodontics as a critical superpower in the prosthodontist's armamentarium, suggesting a shift towards an ortho-centric approach in modern dentistry.

The discourse will challenge the conventional treatment philosophies that favour invasive procedures, such as grinding down healthy tooth structures. Instead, it will argue for the merits of utilizing orthodontics to correct malposition, thereby addressing the root causes of dental issues rather than their symptoms.

### Key topics will include:

- The role of orthodontics in correcting teeth malposition to enhance both function and aesthetics.
- A critical evaluation of dental recessions, their aetiology, and the influence of bone quality, soft tissue thickness, and tooth positioning within the alveolar bone envelope.
- The consideration of orthodontics in the management of recession coverage and the repositioning of teeth for optimized outcomes.
- The analysis of the emergence profile and cements/enamel junction (CEJ) and their contributions to dental stability.
- The interaction between airway, structure, function, and behaviour in dental health and the importance of treating causative factors versus symptoms.

### A new, prioritized protocol will be introduced, advocating a systematic approach to treatment planning that encompasses:

- Airway assessment,
- Aesthetic considerations,
- Functional analysis,
- Biomechanical factors, and
- Periodontal health

The session will showcase diverse case studies to demonstrate the shortcomings of traditional ortho-only treatment protocols. These cases will emphasize the importance of a holistic orthodontic strategy informed by a thorough understanding of the five key areas outlined.

Attendees of the lecture will gain insights into advanced treatment planning, appreciating the scope and predictability of an integrated approach. The presentation seeks to broaden the attendees' perspectives on future planning processes and the substantial benefits of interdisciplinary treatments, charting the course for a future where dental care is as predictive as it is preventive.

# LEARNING OBJECTIVES

By the end of this lecture, participants will be able to:

- **Understand the Integral Role of Orthodontics:**
  - Recognize orthodontics as a central component in the interdisciplinary approach to dental treatment.
  - Identify how orthodontics can fundamentally enhance the outcomes of prosthodontic care.
- **Rethink Traditional Treatment Approaches:**
  - Challenge the traditional paradigms of invasive prosthodontics.
  - Evaluate the benefits of orthodontic correction over symptomatic treatment strategies.
- **Analyse Dental Recession and Tooth Malposition:**
  - Differentiate the potential etiological factors contributing to dental recessions and malposition.
  - Discuss the relationship between tooth position and periodontal health.
- **Examine Comprehensive Treatment Planning:**
  - Understand the components of the new protocol for treatment planning, prioritizing airway, aesthetics, function, biomechanics, and periodontics.
  - Develop a systematic approach to incorporating these components into patient assessments and treatment strategies.
- **Assess Clinical Cases:**
  - Apply the concepts learned to real-world case studies, critically analysing the limitations of ortho-only protocols.
  - Integrate a holistic perspective in diagnosing and formulating treatment plans.
- **Predictive Treatment Outcomes:**
  - Anticipate the likely outcomes of interdisciplinary treatments.
  - Recognize the value of predictive treatment planning and its role in patient care.
- **Incorporate Interdisciplinary Knowledge:**
  - Synthesize knowledge from various dental disciplines to inform orthodontic treatment planning.
  - Plan treatments that are not only reactive but also preventive.
- **Adopt a Future-Oriented Treatment Perspective:**
  - Envision the future trajectory of dental treatment planning.
  - Prepare for the adoption and implementation of advanced, interdisciplinary dental care protocols.

**Participants will be encouraged to actively engage with the material through discussions and Q&A sessions, enabling them to leave the lecture with.**