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Preface

The long-awaited paradigm shift in orthodontics arrived with the introduction of the Invisalign System. This unique treatment approach has been instrumental in removing the ever-present shroud of mystery surrounding orthodontics by allowing both dental practitioner and patient to develop a visual understanding of orthodontic tooth movement. In this way, it has founded a culture of true and attainable visual treatment objectives. Moreover, the esthetic and practical advantages of the system have extended orthodontic services to a greater population.

The Invisalign System is multilingual. Its spoken languages are image acquisition, software (ClinCheck), and the Invisalign aligner. The dialects are the generation of forces, attachment designs, and response of periodontal tissues to the forces generated by the aligner. The regional accents were born through the various applications of ClinCheck, spectrum of cases treated, attachment preferences, and instructions to patients. The adoption of the Invisalign System into a practice, however, is a language unto itself. It has its roots in two different tongues: biology and technology. To be fluent in all of these languages and dialects, the clinician must know the root of the language and how the dialects have been derived.

This book, the first to be written about the Invisalign System, was compiled as an educational tool for all of the languages, dialects, and accents spoken in the world of Invisalign. It is not a how-to manual. Instead, it is designed to expose the clinician to behind-the-scene elements of customization that underlie the production of Invisalign aligners. Equipped with such information, the clinician will better understand the nature of tooth movement with the Invisalign System.

Our deepest gratitude goes to the authors from Align Technology. These individuals took precious time from their daily schedules to write about the inner workings of their operation. The Invisalign System is primarily company driven; therefore, it is their contribution that makes this textbook possible. In particular, Dr Trang Duong's indefatigability in collecting chapters from Align Technology authors is greatly appreciated. We gratefully acknowledge the monumental commitment of Align Technology, through the leadership of Amir Abolfathi, to this project. Finally, we thank Jonathan S. Simmons, whose efforts in the editing, organization, and overall preparation of the manuscript have been invaluable.

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Figs 25-24 to 25-28 Patient 7.

Fig 25-24 (a to l) This 46-year-old patient desired to have the moderate maxillary and mandibular crowding corrected specifically with Invisalign. She had previously declined a four-premolar-extraction treatment by another orthodontist. Mild protrusion was present, but the patient was satisfied with her facial appearance, and her lips were competent. She had a Class I posterior occlusion with anterior crossbite of both maxillary lateral incisors. The maxillary right canine had significant loss of clinical crown length as a result of previous periodontal disease. At initial presentation, she was in periodontal maintenance and had not lost additional bone in 4 years.
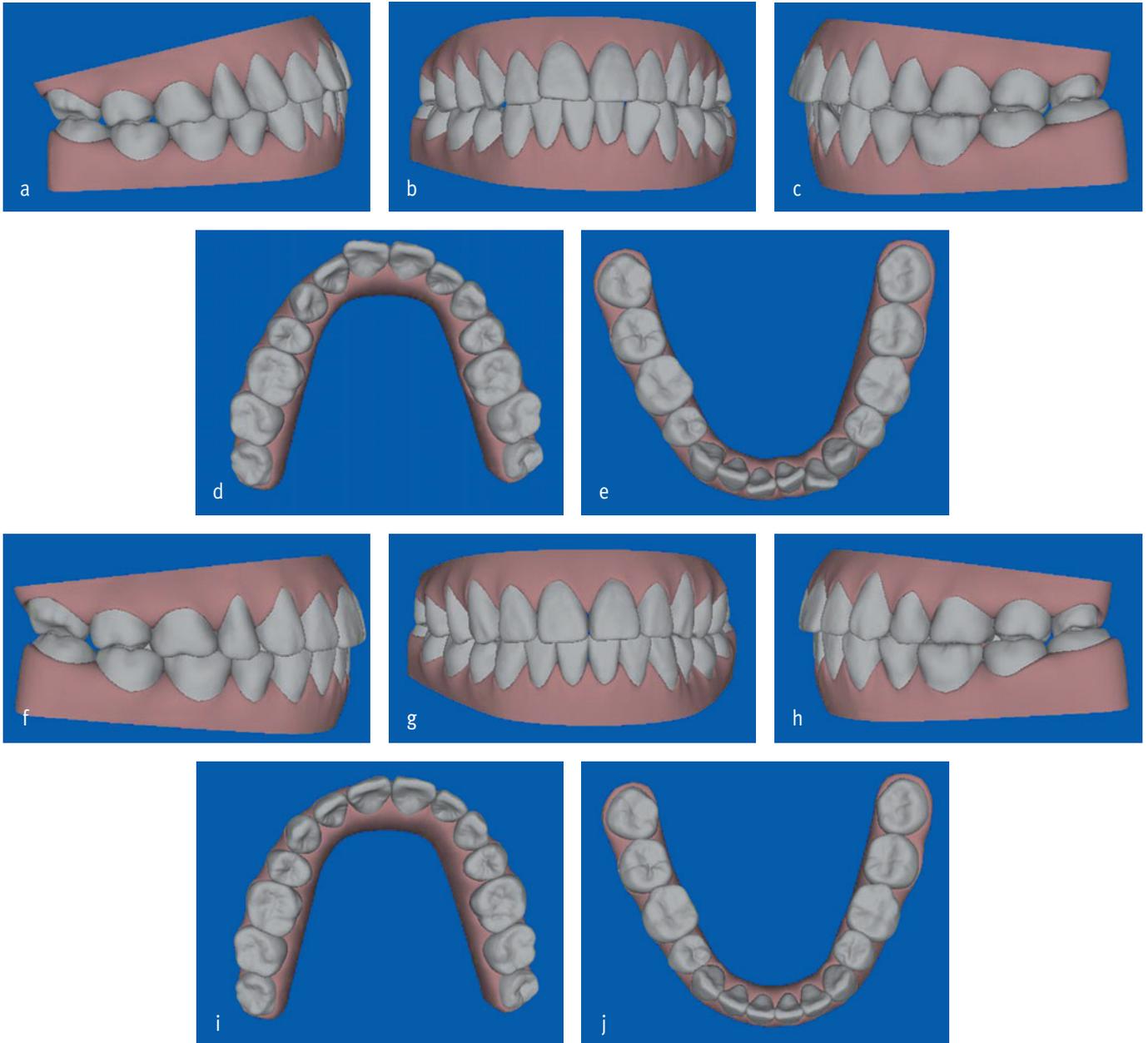
FIG 25-25 ClinCheck images (*a to e*, preoperative; *f to j*, treatment goal) suggested a possible outcome with expansion and IPR.

FIG 25-26 (a to c) Note the traditional use of midline elastics. Midlines were corrected by asymmetric Class II and Class III elastics attached to the teeth on clear buttons.