Dr. Clark has 50 years experience in orthodontic practice and continues to develop innovative appliances in orthodontic and orthopaedic techniques. He developed Twin Blocks in 1977 and is the author of “Twin Block Functional Therapy: Applications in Dentofacial Orthopaedics”, published by Mosby (1995 & 2002).

Dr. Clark is the first recipient of an award of distinction from the British Orthodontic Society for an outstanding contribution to the specialty of orthodontics. In 2008 he received an award from the International Functional Association for personal outstanding international service to functionalism and orthodontics. In 2010 he completed a thesis on “New Horizons in Orthodontics & Dentofacial Orthopaedics” for a D.D.Sc. Degree from the University of Dundee.
Rapid improvement by maxillary arch development with a transverse expander corrected the crossbite and improved arch form. After five months treatment the Transverse expander was kept in place for a further 3 months. Final photographs show the occlusion and arch form 4 years later after 10 months treatment with an upper fixed appliance.
This patient was unwilling to have fixed appliances, but was happy to wear lingual appliances. Upper Transverse and lower Sagittal appliances were used and as treatment progressed the patient agreed to have a lower fixed appliance fitted. This severe malocclusion was not treated to an ideal result, but showed a marked improvement with simple treatment followed by retainers.
This adolescent patient was treated entirely by TransForce Sagittal appliances, followed by invisible retainers. Lingually inclined upper and lower incisors responded well to treatment with lingual TransForce appliances to correct arch form. This approach would apply equally to adult treatment of this type of malocclusion, followed by fixed lingual retainers.
Rapid improvement by maxillary arch development with a transverse expander allows efficient progression to fixed appliances over a period of 5 months with appointments at 10 week intervals. Final photographs are 3 years later.
This young adult with severe maxillary contraction was treated with TransForce Appliances for lingual arch development. She enjoyed having invisible appliances for 11 months while her smile noticeably improved before proceeding with aesthetic fixed appliances to complete treatment.
The lingual approach presents minimum discomfort and inconvenience for adults. Invisible lingual appliances simplify treatment using biocompatible forces for gentle arch development. Typically the time in fixed appliances is reduced by 50%. Treatment was completed in 19 months.
A Class 111 malocclusion with severe upper labial crowding treated in mixed dentition with upper and lower TransForce Transverse Expansion Appliances. Active treatment was completed in 8 months and the TransForce appliances remained in place for 3 months to retain.
Fixed Appliances To Detail Occlusion

This was followed by a short period of treatment with fixed appliances after eruption of permanent teeth. Interceptive treatment in mixed dentition to resolve anterior crowding simplified the finishing stage.
Interceptive treatment for a Class III malocclusion in mixed dentition with an upper Sagittal *TransForce* appliance. The lingual occlusion was corrected after 3 months, and the appliance was used as a retainer for a further 6 months.
No further treatment was required and the final photographs show the occlusion and arch form three years later after eruption of permanent teeth. The profile and facial balance has improved after a short period of interceptive treatment with a Sagittal *TransForce* appliance.
A Class II Division 2 malocclusion with severe maxillary contraction treated with Transverse *TransForce* Appliances to accommodate the unerupted upper lateral incisor. The incisor erupted after 12 months and the appliances acted as retainers for a further 6 months.
After eruption of permanent teeth *TransForce* Sagittal appliances correct slight residual crowding, followed by a lower fixed appliance for 6 months. No upper fixed appliance was required. Interceptive treatment with invisible lingual appliances simplified correction of this malocclusion.
Arch Development in Adult Therapy

TransForce Lingual Appliances can be combined with fixed appliances to enhance arch development in adult therapy. This may be the first step in treatment to make space to align a crowded labial segment before placing brackets. The patient benefits by wearing invisible appliances in the first phase of treatment and reducing the time in full fixed appliances.
The Carriere self ligating bracket system is a highly efficient mechanism to detail the occlusion and deliver precision in the end result. The brackets have a secure locking mechanism and low profile, with improved patient comfort, delivering light controlled forces throughout treatment. Treatment was completed in two years followed by fixed lingual retainers.
TransForce Lingual Appliances
These case studies illustrate the potential of preformed invisible lingual appliances for sagittal and transverse arch development. Light biological forces generated by enclosed nickel titanium springs achieve an excellent response throughout the age range from interceptive treatment in mixed dentition to adult therapy.

TransForce Lingual appliances integrate with all types of conventional fixed appliances at any stage to simplify treatment. This approach is affordable and efficient and typically reduces the time required in fixed appliance by 50%. This is a very important factor, especially in adult therapy. In many cases alignment and arch form can be improved to a stage where invisible finishing appliances may be used to detail the occlusion.

TransForce appliances are constructed to the highest engineering standards by Ortho Orgnizers, advancing the future of orthodontics. They do not cover the palate and are comfortable to wear, so patients of all ages appreciate the advantages of TransForce appliances.