Introduction:
Surgical retraction has always been an integral part of the surgeon’s operative experience. There are a variety of surgical retractors routinely utilized. The concept of the “self-retracting” retraction has long caught the attention of many surgeons. The advantage is a tireless retraction without the need of an assistant dedicated to this task.

Objectives:
To record the time duration of a group of defined operative procedures using the ReeTrakt®, assistant-free, self-retaining retractor system and compare to conventional retraction.

Participants:
A prospective, randomized trial was completed in a community-based hospital. The data was collected using the operative suite records. Forty-three consecutive Thyroid/Parathyroid, general anesthesia, cases were evaluated. All eligible cases were prospectively randomized to conventional manual retraction or ReeTrakt self-retraction. Twenty-three patients were randomized to conventional retraction and the remainder (nineteen patients) to ReeTrakt self-retraction. Twenty-three patients were randomized to conventional retraction and the remainder (nineteen patients) to ReeTrakt self-retraction. Times recorded were from time of incision until completion of surgical closure. All times were recorded contemporaneously upon completion of the surgical procedure.

Results:
The mean operative time for the conventional retraction group (n=23) was 103.2 minutes. The mean operative time for the ReeTrakt group (n=19) was 77.1 minutes. The mean difference was 26.16 minutes. Using a two-sample T-test, the p value was 0.000 (two-sample T-test, using Minitab). The range of times for the ReeTrakt group (n=19) was 77.1 minutes. The mean operative time for the conventional retraction group (n=23) was 103.2 minutes. The mean difference was 26.16 minutes. Using a two-sample T-test, the p value was 0.000 (two-sample T-test, using Minitab).

Background:
Our hypothesis was that self-retracting retractors are more efficient in the conduct of a surgical procedure. It freed the need for a surgical assistant and alleviated the concern of assistant fatigue and frequent repositionings of conventional retractors. Using a standardized operation, Thyroidectomy and Parathyroidectomy are frequently performed, similar operations requiring continuous exposure to perform precise dissection and avoid damage to the vital structures associated with the thyroid gland. The use of self-retaining retractors for Thyroid/Parathyroid surgery has yet to gain popularity.

Methods:
A prospective, randomized trial was designed to compare the outcomes of conventional retraction vs. ReeTrakt (Insightra Medical, Irvine, CA, USA), low-profile, self-retaining retraction system (Figs. 1A, 1B).

Results:
The ReeTrakt system can reduce surgical procedure duration and the costs of appropriate surgical procedures. To not take advantage of this technology is negligent with the surgeon’s time and the hospital’s reimbursement.

Conclusions:
The ReeTrakt retraction system was statistically more time efficient compared to conventional retraction. With more than a twenty-six minute advantage, it significantly shortens the duration of the procedure by approximately 25%.

No assistant was needed for the ReeTrakt group (Fig. 4). The enhanced access and visibility provided by the low-profile retractor and no need for a surgical assistant generates a significant economic impact on surgical costs. The total procedural minute costs are reduced by a mean of 25%, in addition to the savings of the surgical assistant fees.

The ReeTrakt patients had a denser range of case duration than the conventional retraction group. This may indicate that the time duration for the ReeTrakt group is more reproducible than that of conventional retraction.

The ReeTrakt system can reduce surgical procedure duration and the costs of appropriate surgical procedures.

References: