Ankle and subtalar instability have been treated historically as separate entities. Different structures have varying levels of importance statistically and dynamically. Failure to address abnormalities in alignment, ligament integrity and proprioception can explain a relatively high rate of recurrence and the establishment of secondary arthritic changes. We propose a new algorithm of treatment based on the presence and level of osseous and ligamentous abnormalities. We present the early results of the first 300 patients treated with this algorithm.

Introduction:
The ankle forms a functional unit with the subtalar joint (“coxa pedis”). Static stability is determined by the congruency of the large area of the articular surfaces. Dynamically, ligamentous and muscular function are of greater importance. Historically ankle instability has been treated as a single entity, not considering the effect of static and dynamic deformities nor the presence of subtalar instability. This can explain a relatively high rate of recurrence of the instability and the establishment of secondary arthritic changing in both ankle and subtalar joints. We propose a new algorithm of treatment to address this pathology in a more reproducible and successful manner.

Methods:
We propose a new algorithm of diagnosis of peritalar instability and its ensuing treatment. The algorithm distinguishes between instabilities caused by axis deviations (with or without significant ligamentous insufficiency), instability caused by ligamentous lesions alone and functional instabilities. 1) AXIS DEVIATIONS Ankle and hindfoot varus deformity is a well known risk factor for peritalar instability. It is present in 8% of those with primary lateral instability and 28% of those undergoing revision surgical procedures for such instability. Successful treatment is dependant upon determination of the CORA and applying surgical interventions based on the following subgroups 1.A) INTRA-ARTICULAR ANKLE VARUS 1.B) SUBTALAR - "COXA PEDIS" 1.C) COMBINED 2) LIGAMENTOUS INSTABILITY Ankle sprains are one of the most common soft tissue injuries accounting for nearly 40% of sports injuries. There is a significant ligamentous injury in 10-15% of ankle inversion injuries. The anterior talofibular ligament alone is injured in 50-75% cases. There is associated calcaneofibular ligament injury in approximately 15-25% cases. Isolated calcaneofibular ligament injuries occur in just 1% cases whilst posterior talofibular injuries are anecdotal. The majority of acute treatment is conservative. The following subgroups determine the necessary surgical strategies in those who were unsuccessful 2.A) ANKLE 2.B) SUBTALAR 2.B.1) With associated ankle instability 2.B.2) Isolated 3) FUNCTIONAL INSTABILITY Subjective instability usually secondary to neuromuscular conditions

Results:
This algorithm had been applied in our clinics since September 2011. We present the results of the first 300 patients assessed 250 patients have been treated conservatively for acute injuries with a standardised physical therapy regime. There were 8 failures of treatment that required surgery. Overall 50 patients were treated operatively. The algorithm has led to a far higher level of realignment osteotomies than previously performed; there were 20 combined soft tissue and osteotomy procedures and 30 cases of lateral ligament reconstruction alone. There has been no residual instability in patients treated surgically at this early stage. There were no significant complications

Conclusion:
We present a new classification and algorithm of treatment of peritalar instability. This has provided excellent early results. It will prove invaluable in descriptive terms for research as well as determining correct treatment, as demonstrated by our early results.