Purpose
Performing an arthrodesis in the foot and ankle has many benefits, and can be a positive solution to a variety of joint pathologies. The purpose of our study is to do a retrospective review of patients who underwent MTPJ arthrodesis to determine factors in complications were whether the patient smoked, their body mass index (BMI), age, and complications were whether the patient smoked, their body mass index (BMI), age, and compliance of the patient.

Methods/ Hypothesis
A retrospective chart review was performed on 28 patients, 17 male and 11 female. The average age of our patients was 53 years. The follow up on patients ranged from 26 to 130 months. The methods of our study is to do a retrospective review of patients who underwent MTPJ arthrodesis to determine factors in complications were whether the patient smoked, their body mass index (BMI), age, and compliance of the patient.

Results
Of the 28 patients reviewed, four were smokers and had smoked throughout their surgical and postoperative treatment, the average BMI was 24.3, 3% patients had previous surgery, eight patients had prior hallux valgus and 85, the average time to radiographic union was 9.5 weeks, and average time to full weight bearing and return to work was 11.5 weeks. Of the complications reviewed 6 had malposition, 4 non-union, 4 failed hardware, 4 superficial or deep infections, one dehiscence, four with metatarsalgia and eight with IPJ arthritis. Overall, 42.9% of patients had no complications. Sixty-three percent of patients who received a graft had a significant decrease in malposition, 60% of smokers had no complications. All Down syndrome patients had at least one complication. Half of the diabetic patients had no complications. One central pedal patient had at least one complication. 60% of rheumatoid and 50% of trauma patients had no complications. 64.3% of patients had no serious complications. Of the soft tissue complications reviewed, one patient had a dehiscence. 6% of patients received a grafting hallux 3D. Only 14.3% patients had major complications, that being a nonunion. Patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted.

Arthritis/ Osteoarthritis
The double fusion technique resulted in only 24.3% of patients having a major complication, that being a nonunion. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted. 60% of patients who had a graft placed did significantly better than patients who did not. 96% of patients were free of any soft tissue complication. No amputations or cases of seromas were noted.