Lesser metatarsophalangeal instability is a common cause of forefoot pain. We studied a cohort of 154 consecutive patients and describe their clinical features, management and outcomes after a mean of 5 years. Two-thirds were treated non-surgically and one-third surgically; the outcomes were similar and many patients had some residual symptoms.

### Introduction
Lesser metatarsophalangeal instability is a common cause of forefoot pain. Previous studies described fewer than 20 patients each. In this prospective study we followed a cohort of 154 patients looking at their presentation, management and outcome.

### Patients and methods
We studied characteristics of patients presenting to a specialist foot and ankle clinic with lesser metatarsophalangeal instability. We used the draw test to diagnose and stage instability. We recorded the nature of the presentation, involved toes, severity of instability, presence of toe deformity and management. Patients were followed up in clinic or by telephone interview by way of pain and AOFAS outcome scores. Outcomes were assessed by an observer who had no part in patient management.

### Results
We identified 154 patients with lesser metatarsophalangeal instability. 127 (82%) were female and 27 (18%) male. The median age was 56 years (range 33-85). One foot was affected in 107 patients (69%) and both feet in 47 (31%). The second toe only was affected in 99 patients (64%), the third or fourth toe only in 3 (2%) and multiple toes in 52 (34%) but always involving the second toe.

Three main clinical patterns were recognised. Seventy three patients (47%) presented with a complaint of generalised forefoot pain. Sixty eight (44%) presented with pain and sometimes deformity localised to the second toe. Thirteen patients (8%) presented with a complaint of toe deformity in which instability of the MTPJ played a secondary but significant role.

150 toes (52%) had grade 1 instability, 108 (37%) had grade 2 instability and 21 (7%) had grade 3 instability. Twelve toes (4%) presented dislocated with a history suggestive of progressive instability. Ninety nine patients (64%) were treated without surgery, using functional taping, shoe modifications, insoles and injections. Fifty-five patients (36%) had surgery, including lesser toe straightening, flexor-extensor transfer, plantar plate repair, Weil and Stainsby procedures.

A follow-up rate of 79% was achieved over a mean period of 65 months (range 14 to 138). Both the conservatively and surgically managed groups were comparable in terms of age, sex and Tegner grade. However, the surgically treated group showed a higher number of dislocatable (grade 3) or dislocated toes at presentation (22% versus 7%) which was significant. The mean pain score and standard deviation at follow-up was 31mm ± 23.7mm for the conservative...
group compared to 23mm ± 24.1mm in the surgical group. The mean AOFAS score was 69 ± 16.3 for the conservative group compared to 67 ± 17.8 in the surgical group. 39 patients (52%) were either satisfied or very satisfied with their treatment in the conservative group compared to 31 patients (66%) in the surgical group. None of these differences were statistically significant.

**Conclusion**

Metatarsophalangeal instability is a common cause of forefoot pain and three typical clinical patterns can be recognised. Most patients can be treated with conservative methods. The surgically treated patients have no significant improvement in outcomes with regards to pain or function. Many patients have some continuing symptoms.