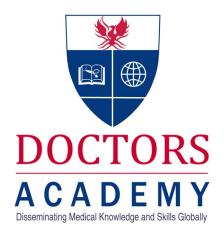
## The Use of Geometric Morphometrics as a New Method to Analyse Glenoid Bone Loss after Shoulder Dislocation

Mr. Thomas Key, Professor Lennard Funk
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#### The Use of Geometric Morphometrics as a New Method to **Analyse Glenoid Bone Loss after Shoulder Dislocation**

#### Mr. Thomas Key, BSc

Final Year Medical Student

The University of Manchester Medical School

Professor Lennard Funk, BSc, MB ChB, MSc, FRCS(Tr&Orth), FFSEM(UK)

Professor of Orthopaedic and Sports Medicine University of Salford Consultant Shoulder & Upper Limb Surgeon Wrightington Hospital

Address for Correspondence:

Mr. Thomas Key: thomaskey88@gmail.com

This is the abstract of the presentation that won 'Doctors Academy Award for Academia and Research' (best oral presentation) at the Preston National Surgical Undergraduate Surgical Conference 2012.

#### Abstract

Introduction

Glenoid bone loss occurs at the anteroinferior and posteroinferior aspects of the glenoid rim in anterior and posterior instability respectively. This morphological Results change in the shape of the glenoid fossa predisposes to The areas of most pronounced variation between the increasing instability. The aim of this study was to use dislocation and control groups were as expected, at the geometric morphometrics to analyse changes to glenoid anteroinferior, and posteroinferior glenoid regions. This morphology in traumatic shoulder instability.

#### Materials and methods

fossa. Shape information was extracted from the pathology.

landmark co-ordinates and analysed for variation in the geometric properties of the glenoid fossa using geometric morphometrics.

indicated that geometric morphometrics allows variation in the geometric properties of the glenoid fossa after dislocation to be accurately analysed at a good level of 3D models of the surface of the glenoid fossa were detail in three dimensions. Compared to conventional created using CT scans from 8 patients with 5 techniques using single glenoid measurements from 2 landmarks, dimensional images, morphometrics represents an corresponding to the same anatomical sites between exciting new avenue for analysing the morphological samples were digitized onto the surface of the glenoid changes to the glenohumeral joint involved in shoulder

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