smith&nephew

JOURNEY◇
DEUCE◇

Bi-Compartmental Knee System

Why less is more

What advantages does a uni have over a total knee replacement?

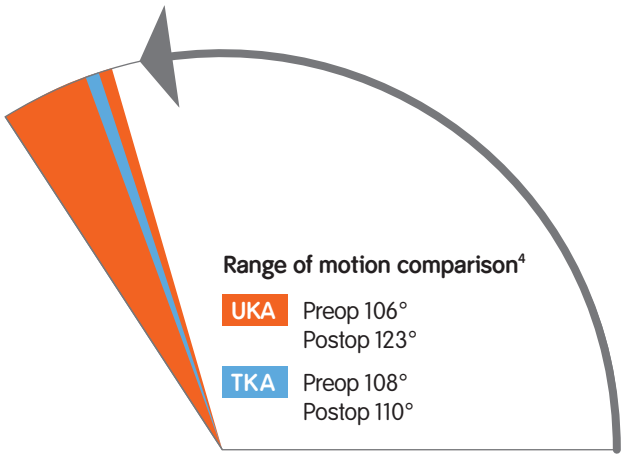
While the literature reports good outcomes for many current total knee systems, clinical scores do not necessarily reflect patient satisfaction or function. The **primary advantages** of a unicondylar knee arthroplasty over a total knee arthroplasty – **proprioception** and **more normal gait** due to the **retention of the ACL** and **preservation of the capsular structures** – have been noted in several studies:

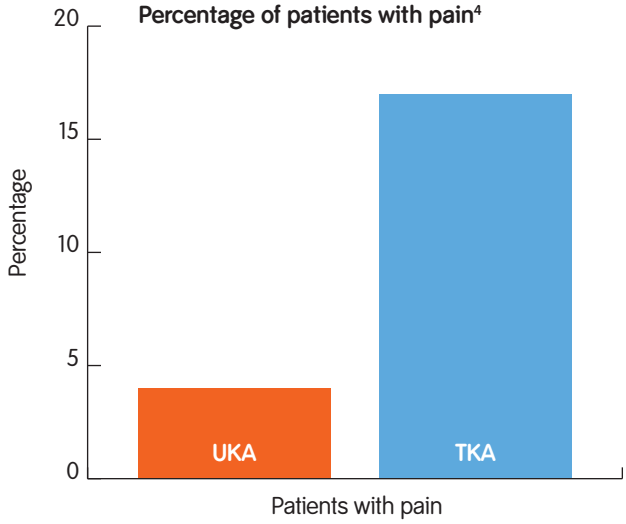
- A comparison of 120 UKAs to 81 TKAs found that the **uni group had better ROM and ambulatory function**.[1]

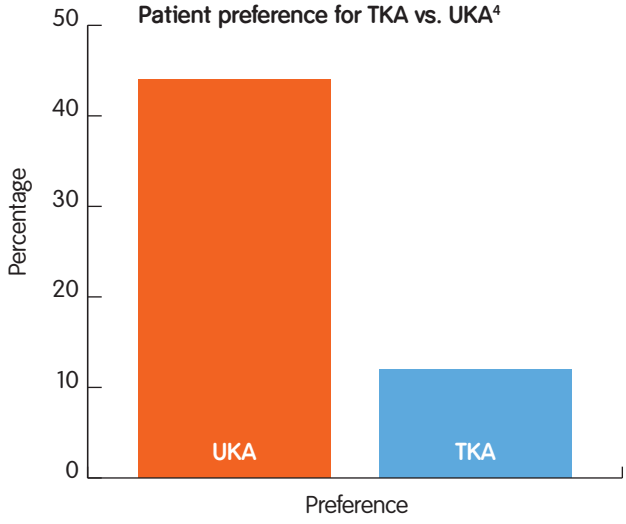
- A cadaveric study found that there were **no significant differences in tibial axial rotation** between normal knees and uni-compartmental knees, but that tri-compartmental replacement significantly affected tibial axial rotation.[2]

- A study of 50 patients with **ACL-deficient knees** showed that **proprioception or joint position sense** was **impaired in comparison to a control group**. Joint position sense was not improved with exercise therapy, suggesting the importance of the retention of the ACL.[3]

- A study that evaluated 23 patients who underwent a UKA on one side and a TKA on the other during the same hospital stay found patients with the UKA had **better early flexion, less pain and felt** the UKA was **more natural**.[4]





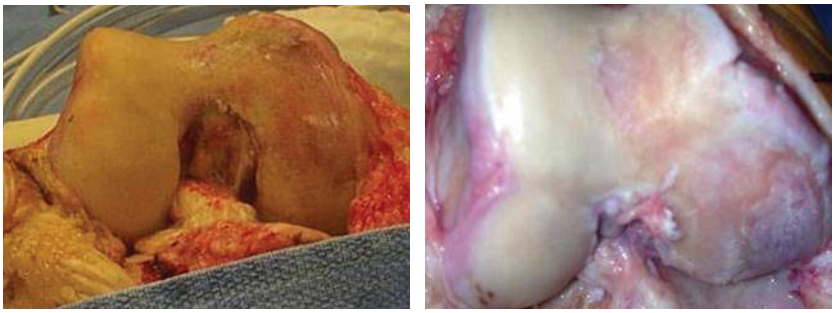


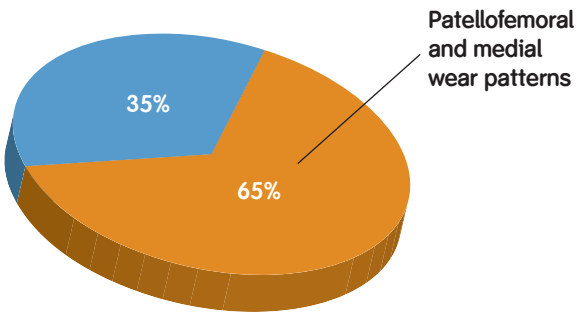
Is there a need for a bi-compartmental knee?

While the UKA appears to have many benefits, its indications are limited. One study found that with a strict adherence to selection criteria, only 6% of patients might be considered candidates for a UKA.[5]

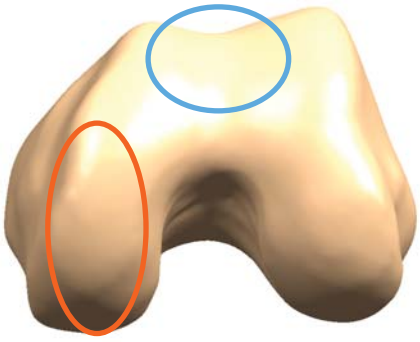
In many total knee arthroplasty situations, **the medial and patellofemoral compartments are affected, and the lateral compartment is pristine**.

A study of **100** consecutive patients found that **73** displayed this pattern of wear.[6]





In a series of **600** patients, **patellofemoral arthritis** was associated with **medial femorotibial narrowing** in **65%** of cases.[7]



There are documented series in the literature of patellofemoral and unicondylar devices being implanted simultaneously, with the stated advantages of **bone preservation, range of motion and proprioception**.[8,9]

Why less is more

The JOURNEY® DEUCE® Bi-Compartmental Knee System is a revolutionary concept where the medial tibiofemoral and patellofemoral compartments are replaced with a single femoral component and medial uni tibial component. It allows for the **benefits of unicondylar arthroplasty** to be applied in **situations where a total knee arthroplasty would typically be performed**.

Treats both affected compartments

While some studies suggest that a UKA can be used in the presence of patellofemoral disease, there is the **risk of patellofemoral pain and early failure**. One study has noted that **daily activities** such as stair climbing and chair rise **are affected by patellofemoral pain and degeneration**.[10] The JOURNEY DEUCE system allows surgeons to offer a comprehensive treatment solution to patients with bi-compartmental disease that is a less invasive procedure than a TKA.

Preserves normal motion

Like a UKA, the JOURNEY® DEUCE® Bi-Compartmental Knee System **preserves the ACL** and does not require medial, lateral or posterior releases, **allowing for normal proprioception to be retained**.

Maintains bone stock

The JOURNEY DEUCE system **removes approximately 50% less bone**[11] than a TKA by leaving the lateral compartment intact, maintaining bone stock and the anatomic joint line.

Promotes more rapid recovery

The JOURNEY DEUCE system can be implanted using a minimally invasive approach if desired, and **patients' recovery should resemble a UKA, with less blood loss and pain**.[12]

Increases treatment options

The JOURNEY DEUCE system with an OXINIUM® Oxidized Zirconium femoral component is an **ideal choice for younger or more active patients**. However, as the benefits of less bone and tissue resection also are advantageous to older patients and those who may not require the wear reduction capability of OXINIUM technology, the JOURNEY DEUCE femoral component is also available in CoCr to allow for complete demand matching.

Maintains flexibility

The JOURNEY DEUCE Knee System works with the GENESIS® II SPC Total Knee System, as it shares the same A-P box cuts and **proven lateralized trochlear groove for optimized patellar tracking**.[13] Postop revisions have the potential to be revised to a primary total knee replacement.

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