



Consensus Position Statement on Bilateral Total Knee Replacement

Australian Orthopaedic Association, Australian Knee Society & Arthroplasty Society of Australia

December 2021

Background

The Australian Knee Society is the peak body representing clinicians and researchers in the science of knee surgery and knee conditions in Australia with the aim of advancing the standard of surgery and management of conditions of the knee joint in Australia.

The Arthroplasty Society of Australia is the peak body representing clinicians and researchers in the management of hip and knee arthroplasty in Australia, dedicated to the exchange of scientific and clinical knowledge with the aim to advance the standard of joint replacement procedures in Australia.

This consensus position statement deals with the simultaneous and staged bilateral Total Knee Replacement (TKR). It was achieved using a Delphi technique, a systematic structured communication technique to achieve consensus using the executive of The AKS and ASA as the expert panel in a two-round process. All statements received 100% consensus in agreement unless otherwise stated.

1. For patients requiring replacement of both knees, bilateral TKR can be performed simultaneously under a single anaesthetic or as staged procedures, with 2 unilateral TKR under separate anaesthetics and hospitalisations.
2. A shared clinical decision-making process between patient, surgeon, anaesthetist and other treating specialists is ideal to enable a discussion to the risks and benefits of simultaneous compared to staged bilateral TKR for individual patients who require both knees replaced.
3. The medical safety of patients who require both knees replaced should always prevail over expedition of their orthopaedic surgery
4. Those with higher age, Body Mass Index and American Society of Anaesthesia (ASA) classification are at higher risk of complications with bilateral simultaneous TKR.
5. All patients for unilateral, staged bilateral and simultaneous bilateral TKR should undergo pre-operative optimisation especially in regards diabetic control, anaemia, immuno-suppression, bacterial colonisation, nutrition and BMI.
6. The risks of TKR are additive, such that single isolated TKR exposes the patient to less risk of complication than bilateral Total Knee Replacement, irrespective of the timing.
7. If bilateral TKRs are performed as staged procedures, the optimal period between each procedure remains uncertain, especially if the patients are screened for suitability between the first and second procedure. #



8. Bilateral simultaneous TKR are associated with longer inpatient stays and greater narcotic consumption compared to a single TKR, however, in total less than or similar to two staged TKRs. #

#86% Agreement



Consensus could not be achieved for:

- 1 A criteria based on Body Mass Index, Age and or American Society of Anaesthesia (ASA) classification to identify low risk patients for simultaneous bilateral TKR.
- 2 The risk of complications, including venous thrombosis events and all-cause mortality, when comparing simultaneous bilateral TKR to staged bilateral TKR.