



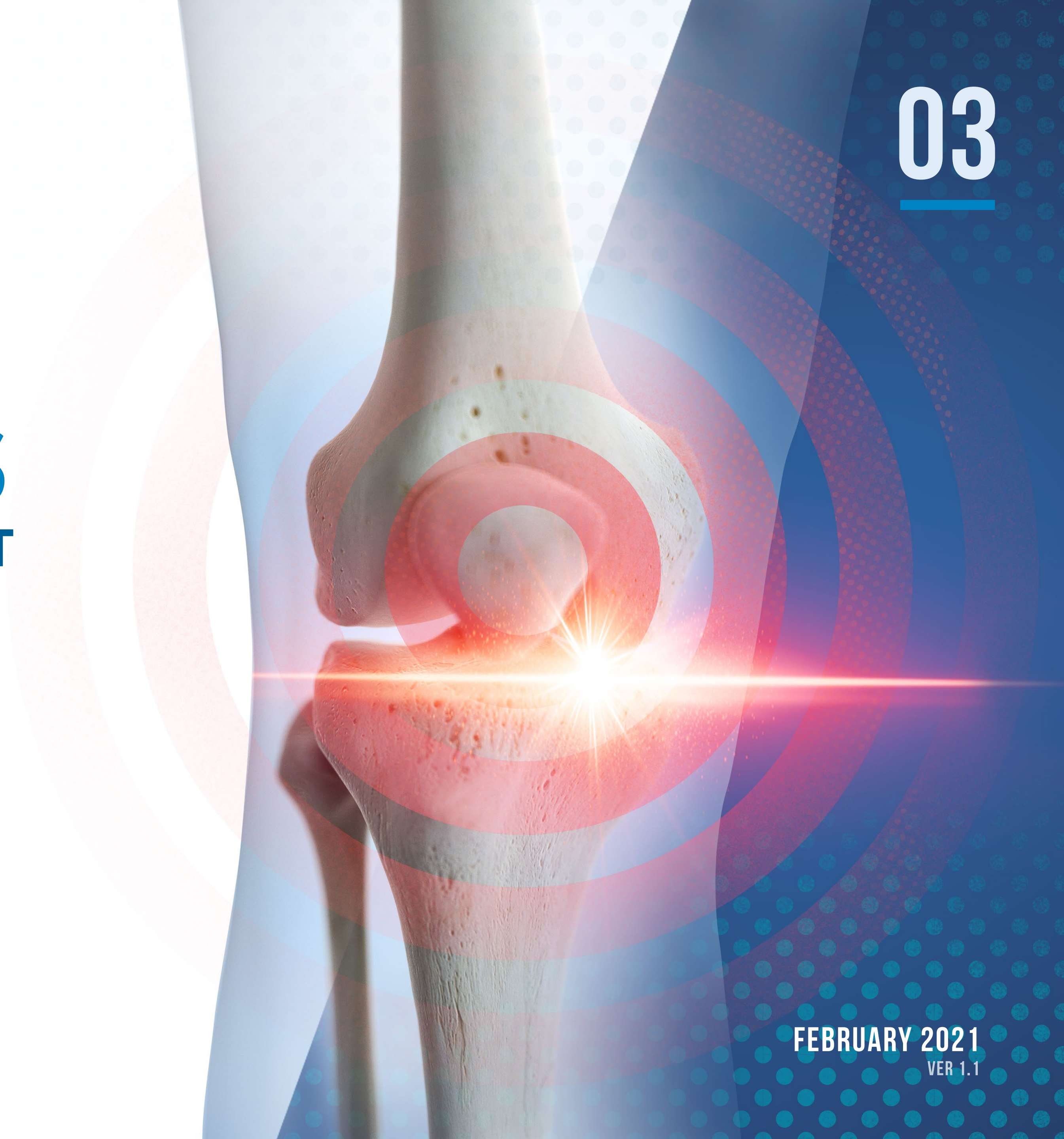
bpacnz
PRIMARY CARE
UPDATE SERIES

OSTEOARTHRITIS

EPISODE 4: SURGICAL MANAGEMENT

03

FEBRUARY 2021
VER 1.1

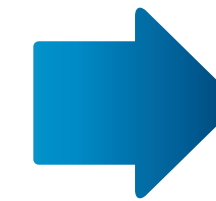


Surgery – pre-operative considerations

Pre-operative pain, depression and anxiety, and the presence of concomitant pain at other joints are associated with less favourable pain outcomes post-surgery



Encourage weight loss to improve surgical outcomes but morbid obesity is not necessarily a contraindication



Pre-habilitation is important – patients that engage in tailored programmes to increase baseline fitness prior to surgery have improved fitness post-operatively and reduced length of hospital stays[†]



Risk factors for infection should be considered – prophylactic antibiotics may be needed



If the patient hasn't already **stopped smoking**, **re-emphasise that they should** and explain what the risks are in terms of post-operative infection if they don't



Compared with obese* patients, non-obese patients have reduced post-surgical rates of:

- ✓ Pain
- ✓ Disability
- ✓ Deep vein thrombosis
- ✓ Infection
- ✓ Dislocation
- ✓ Revision surgery

See Pozzobon *et al*, 2018 (Ref #3 below) for exact differences (all differences in variables shown here were statistically significant)

* Obesity is defined as a patient having a BMI ≥ 30 kg/m²; † In some cases, patients engaging in structured prehabilitation programmes make a decision that they no longer want surgery.

BMI, body mass index; CI, confidence interval.

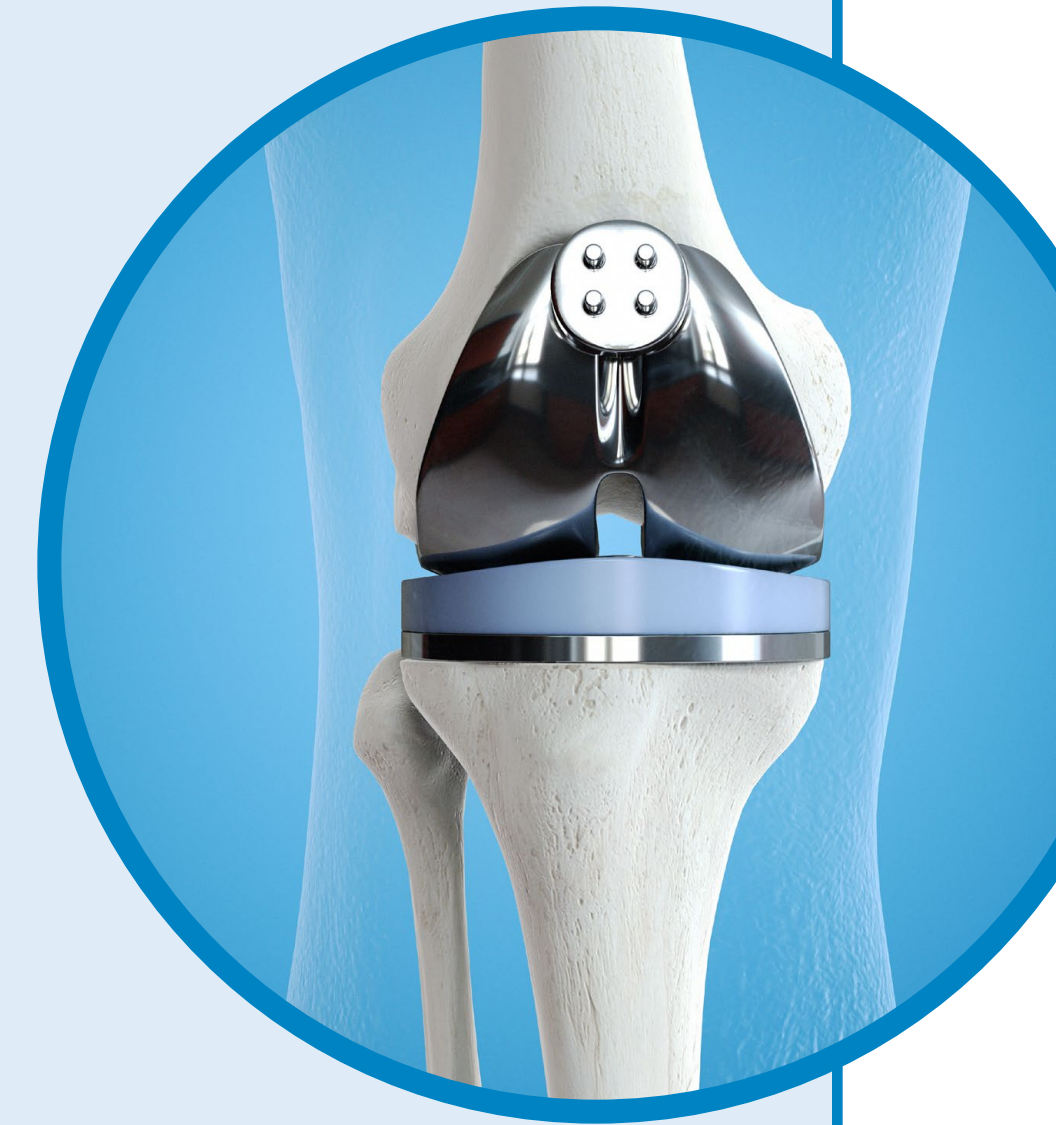
1. Wainwright TW, Gill M, *et al*. Acta Orthop. 2020;91:3–19; 2. Moyer R, Ikert K, *et al*. JBJS Reviews 2017;5:e2; 3. Pozzobon D, Ferreira PH, *et al*. BMJ Open. 2018;8:e017689; 4. Aytekin E, Sukur E *et al*. J Clin Orthop trauma. 2019;10:345–9

Surgery for patients with OA

Joint replacement is the most common surgery for OA



- ✓ **Effective** in patients with advanced knee and hip OA once more conservative treatments (i.e. exercise, lifestyle modifications and analgesics) no longer provide adequate relief from OA
- Joint replacements at other anatomical locations are also available, but are less often performed, e.g. ankle, shoulder, fingers
- **Other procedures include:**
 - Arthroscopy for patients with injury-related knee OA; arthroscopic surgery is not generally recommended for progressive degenerative knee OA due to a lack of clinical benefit and an increased risk of harm compared with placebo surgery
 - Arthrodesis (joint fusion; predominantly for foot, ankle and spine OA)



Access to funded surgeries differs substantially by region, patient specific factors, and the joint affected

- People with hip OA usually score higher than people with knee OA
- The patient's condition generally needs to be severe to receive public funding, e.g. pain not controlled with maximal analgesics, night pain, significant impact on activities of daily living, requiring a walking aid



Across NZ between 2005–2016

Hip replacements:

54%

were **publicly** funded

Knee replacements:

59%

were **publicly** funded

OA, osteoarthritis.

1. Sattler L, Hing W, Vertullo C. AJGP. 2020;49:587–591; 2. Lao C, Lees D, *et al.* BMJ Open 2019;9:e032993

Surgery – post-operative timeline

Conventionally:	Time until testing new joint	Time spent in hospital	Time crutches may be required for	Time taken to reach maximally improved status
Knee replacement	Same day or the next day	5–7 days	Up to 6 weeks	6 weeks+
Hip replacement		4–7 days		3–6 months+

However:



Rapid recovery replacements are a new focus – which utilises techniques to switch off pain intra-operatively before it starts

- This improves physical, mental and physiological recovery following surgery
- Some patients can now be discharged home within **24 hours** of their surgery

For example:



Tranexamic acid is being increasingly utilised during OA surgeries to reduce or stop heavy bleeding and improve post-operative outcomes



Other techniques include tailored pre-operative education, additional blood preservation protocols and multimodal analgesia delivery

Surgery – post-operative considerations



Minimise post-operative opioid use; ideally only used for 5–10 days, if required



The aim following surgery is to have the patient return to being able to perform the activities they enjoyed before their osteoarthritis became an obstacle to engagement

- This will vary, however, in *most* cases repetitive high impact activities should be avoided, e.g. skiing



The demand for revisions is reducing because of improvements in reactivity of polyethylene materials used in implants

Expected life of joint replacements (hip and knee)

10 years	90% functioning well
20 years	80% functioning well

What about alternative “advanced” procedures?

To date, there are no treatments that completely arrest structural deterioration of cartilage/bone associated with OA, or that are able to reverse existing structural damage

A number of “advanced” procedures are being marketed to patients in private clinics in NZ:



Stem cells have widely been cited as a potential regenerative treatment (transplant or injection)

- Very expensive (\$10,000–20,000)
- Results from clinical trials are mixed, and **there is not enough evidence for them to be recommended**



Platelet rich plasma (PRP) involves injecting a volume of the patient's plasma with a high concentration of platelets higher than the average of peripheral blood (obtained via centrifugation)

- PRP injections are less expensive than stem cells (~\$500) but there is still **insufficient evidence to support their effectiveness for patients with OA**