Major Amputations of the Lower Limb

Murray Cox

Vascular Surgeon - Taranaki Base Hospital



Major Amputations of the Lower Limb

Crit	ical Limb ischaemia	> 200 (85%	5)
------	---------------------	------------	----

- Acute Limb Ischaemia20 (9%)
- Trauma 5. (2%)
- Tumours/ vascular malformations 2 (1%)
- Necrotizing infection5 (2%)
- Pain Syndromes2 (1%)

Principles

- Remove pathology
- Establish well healed wound
- Best rehabilitation possible
- Increase in energy for Ambulation on

AKA 50 – 70%

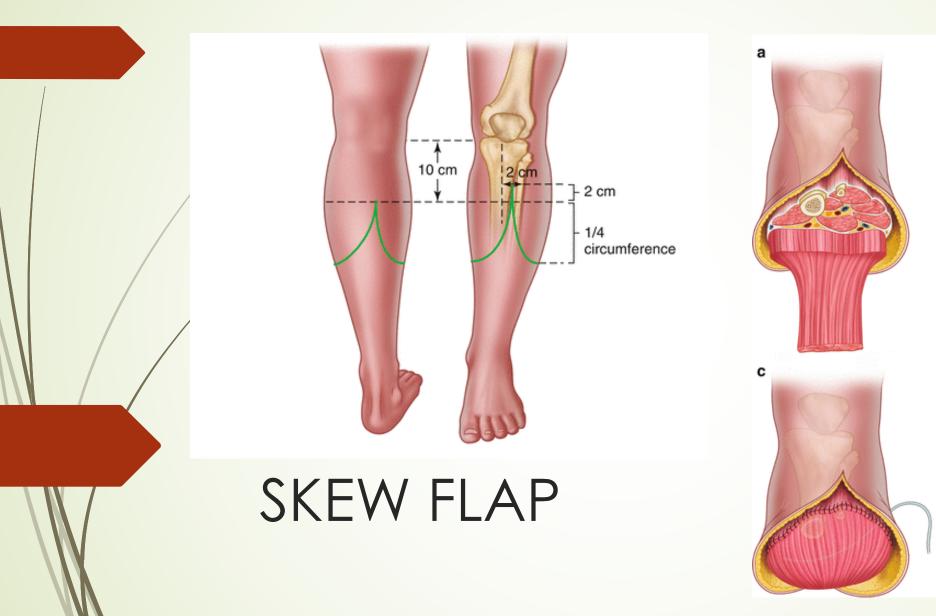
BKA 10 - 40%

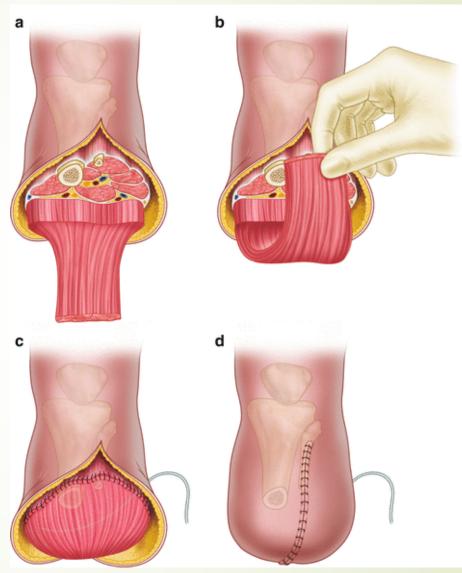
Options

Transmetatarsal (forefoot)	(30-40)	
----------------------------	---------	--

- ▶ Peg (Symes) (3-5)
- Below Knee Amputation
 - Posterior Flap (>100)
 - Skew Flap (5-10)
- Through Knee amputation.
 - Gritti-Stokes (10-20)
- Above Knee amputation (>100)
- Hindquater very rare (2)

Total: approx. 250

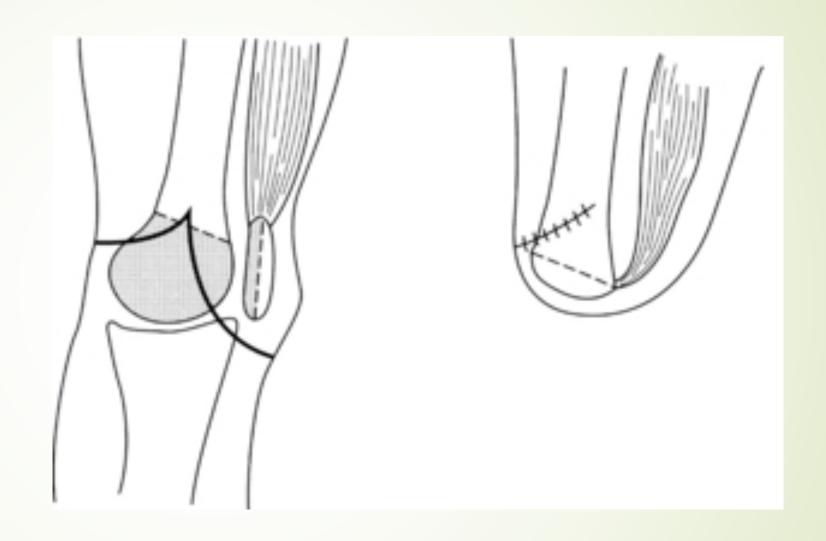




Options

- Transmetatarsal (forefoot)
- Peg (Symes)
- Below Knee Amputation
 - Posterior Flap
 - Skew Flap
- Through Knee amputation
 - Gritti-Stokes
- Above Knee amputation
- Hindquater very rare

GRITTI-STOKES



Options

- Transmetatarsal (forefoot)
- Peg (Symes)
- Below Knee Amputation
 - Posterior Flap
 - Skew Flap
- Through Knee amputation
 - Gritti-Stokes
- Above Knee amputation
- Hindquater very rare

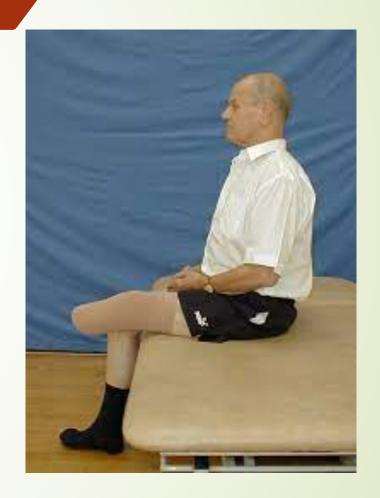
Determining Level Comorbidities

Current Functional Status

Rehabilitation potential

Levels of Rehabilitation

- Ambulation
- Ambulation with aid
- Transfer independently
- Transfer with one nurse
- Transfer with 2 nurses
- Transfer with Hoist



PERIOP CONSIDERATIONS... Assessment of Level

- Surgeon assessment
- Femoral pulse +/-
- Skin temperature
- Skin quality
- Transcutaneous O2 but still a percentage game

PERIOP CONSIDERATIONS...

Establishing Arterial Flow

- Establishing arterial inflow to the groin so a BKA can be performed
 - ► (AKA BKA)
- Endovascular intervention
 - Eg iliac stents (10)
- Operations
 - CFA endarterectomy. (1)
 - **▶** FFXO. (1)
 - Ax Fem. (1)

PERIOP CONSIDERATIONS...

Analgesia

- Residual Limb pain
- Phantom Pain
 - Sensation
 - Pain
- Pain free before surgery
- Epidural prior to surgery
- Nerve blocks +/- catheters
 - Femoral / sciatic
 - Surgeon placed sciatic / tibial nerve catheters
- Ketamine infusions
- PCA
- Specialist meds for Phantom pain
 - TCD, Calcitonin, Gabapentin

PERIOP CONSIDERATION...

DVT prophylaxis

- Contralateral limb
- Amputated side
 - Chemical + mechanical prophylaxis
 - Liaise with anesthetist regarding timing

PERIOP CONSIDERATIONS... Antibiotic Prophylaxis

- Antibiotic Prophylaxis
- Need anerobic cover for AKA
 - ie Augmentin / Cefazolin and Metronidazole
- If significant foot sepsis be guided by micro cultures
- Cefazolin is otherwise adequate

PERIOP CONSIDERATION...

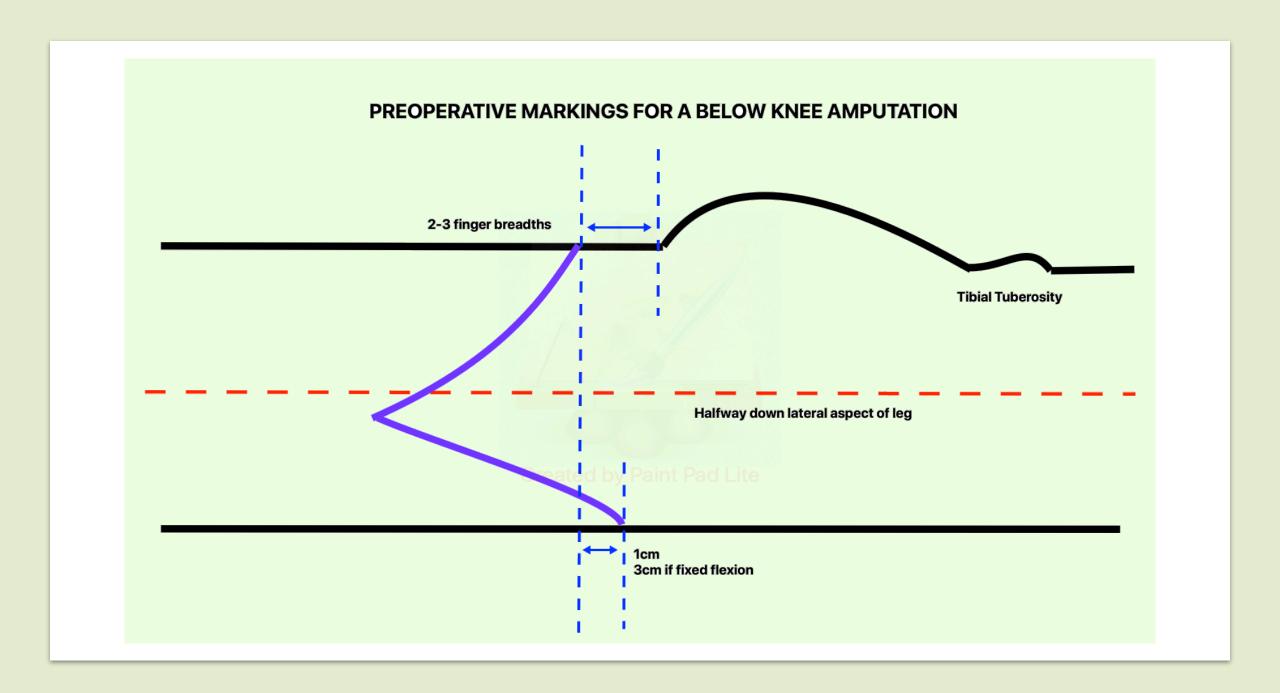
Physiotherapy

- Mechanical DVT prophylaxis
- Thigh
- Stump (BKA)
- Avoid trauma to BKA stump
 - Cot Sides
 - Patient mindfulness

Scenario 1.



- Locum in a provincial town. The overworked sole vascular surgeon has asked you to do an AKA one Saturday so they can go to golf
- Markings



Above Knee Amputation

- Fish mouth incision
- Posterior flap 2cm longer (especially if flexion contracture)
- Divide femur mid thigh
- 3:0 prolene transfixation suture if SFA patent
- Divide sciatic nerve as distal as possible initially –
 Beware of large nutrient arteries
- Sciatic nerve catheter
- Redi Vac drain

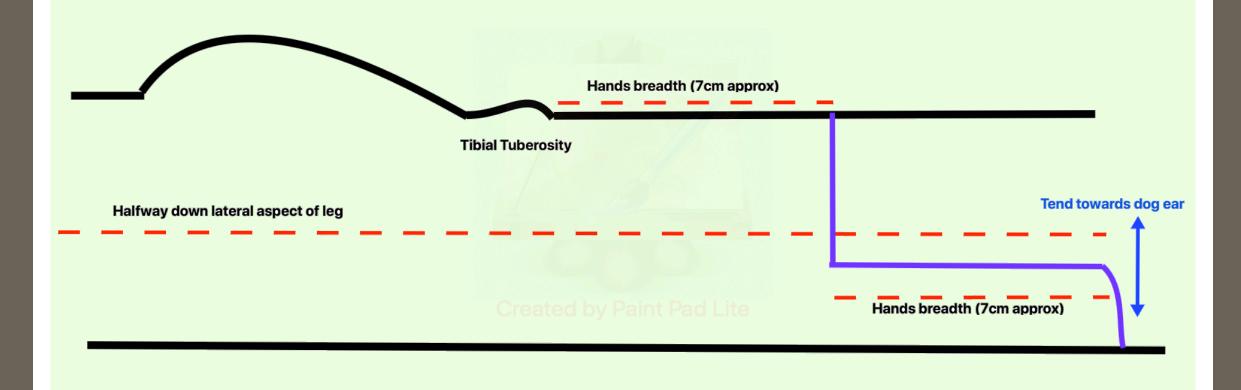
Scenario 2

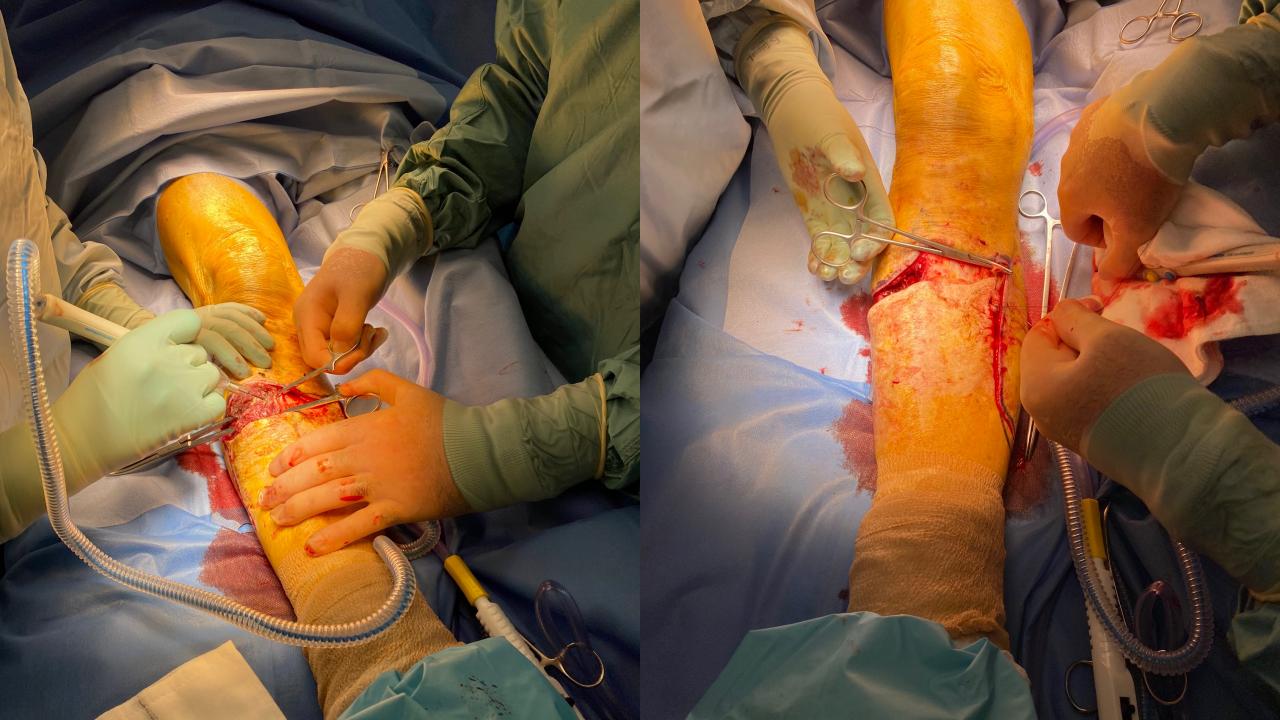


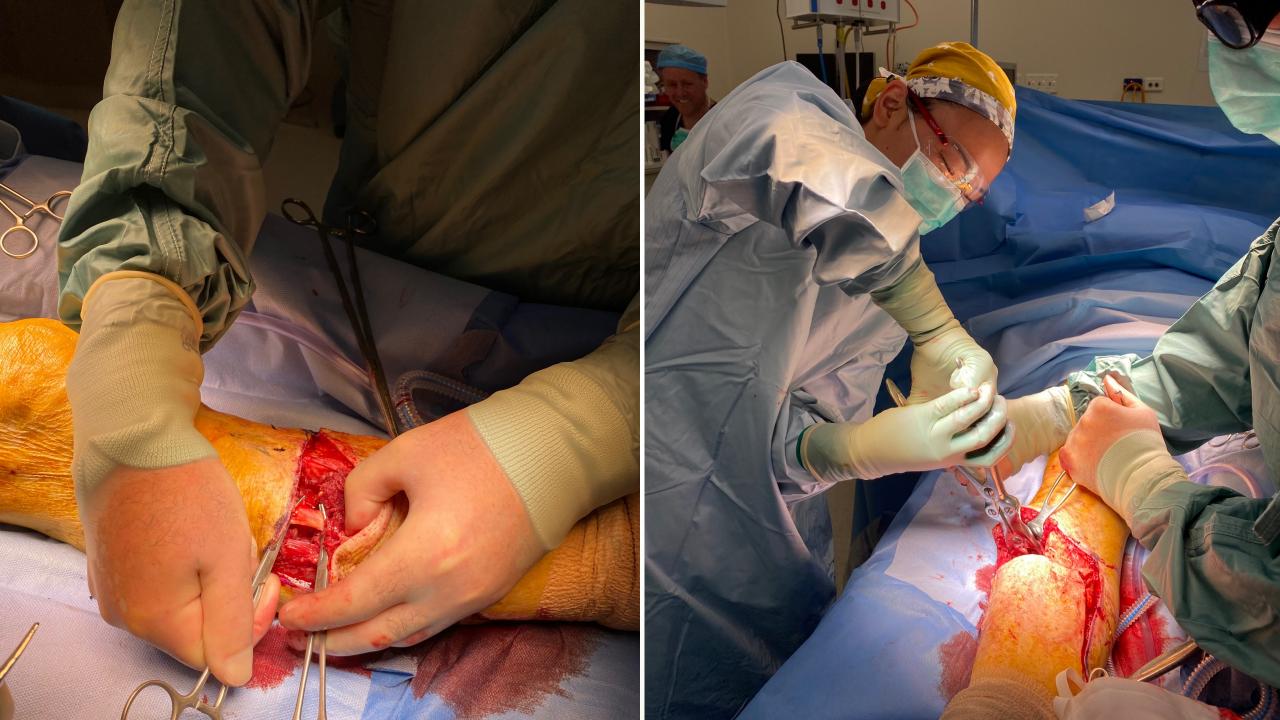
- Man presents in extremis with rapidly progressive necrotizing soft tissue infection and needs urgent amputation
- 1. Guillotine
- 2. Below Knee amputation
 - With oedema may be a staged operation

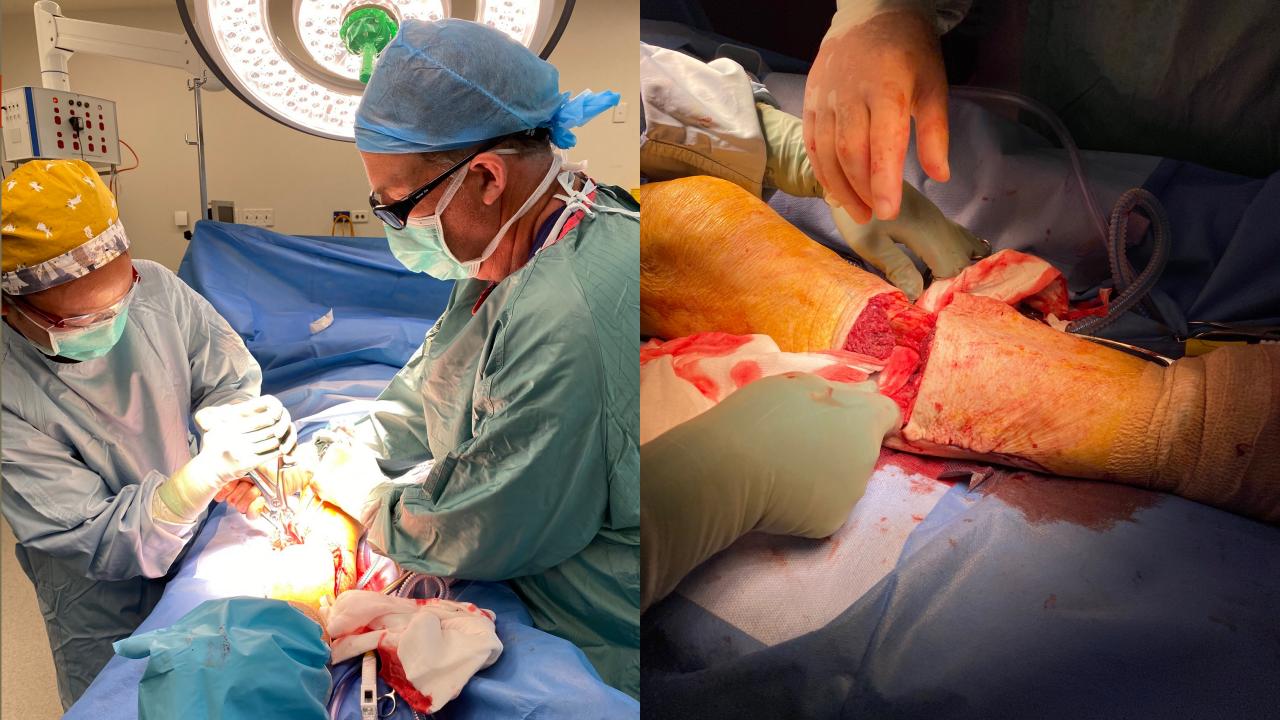
Below Knee Amputation

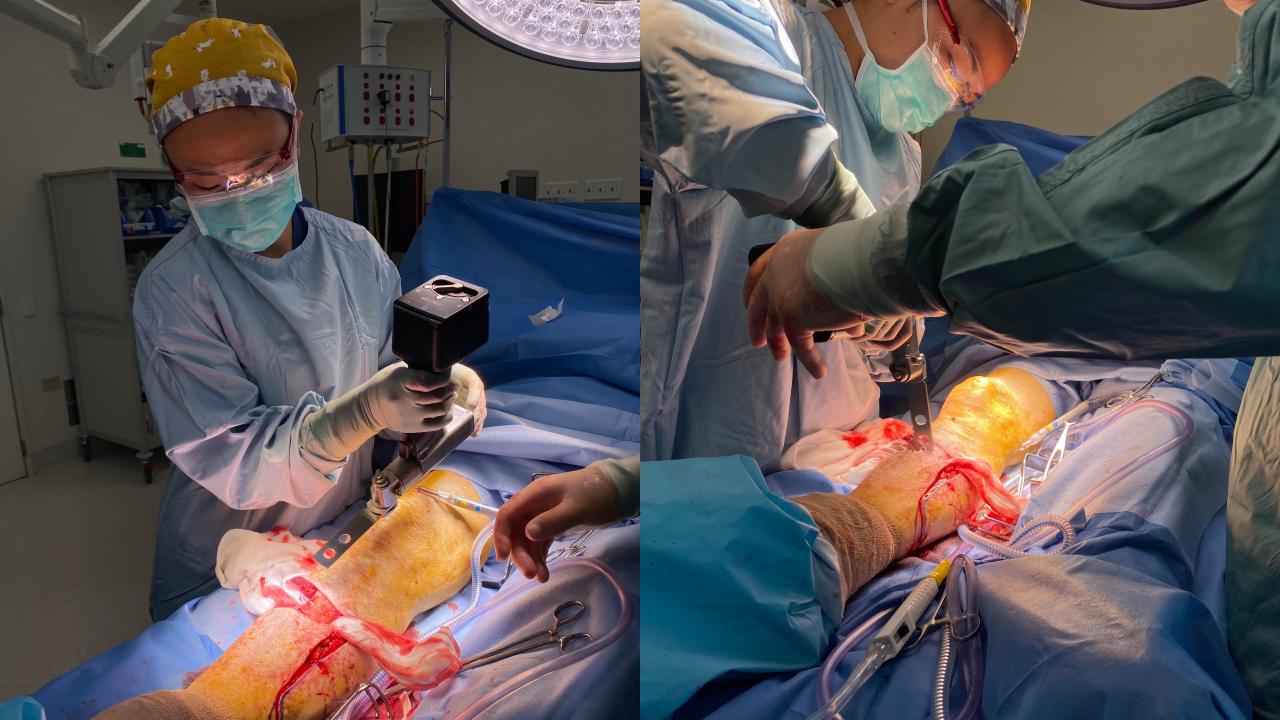
PREOPERATIVE MARKINGS FOR A BELOW KNEE AMPUTATION



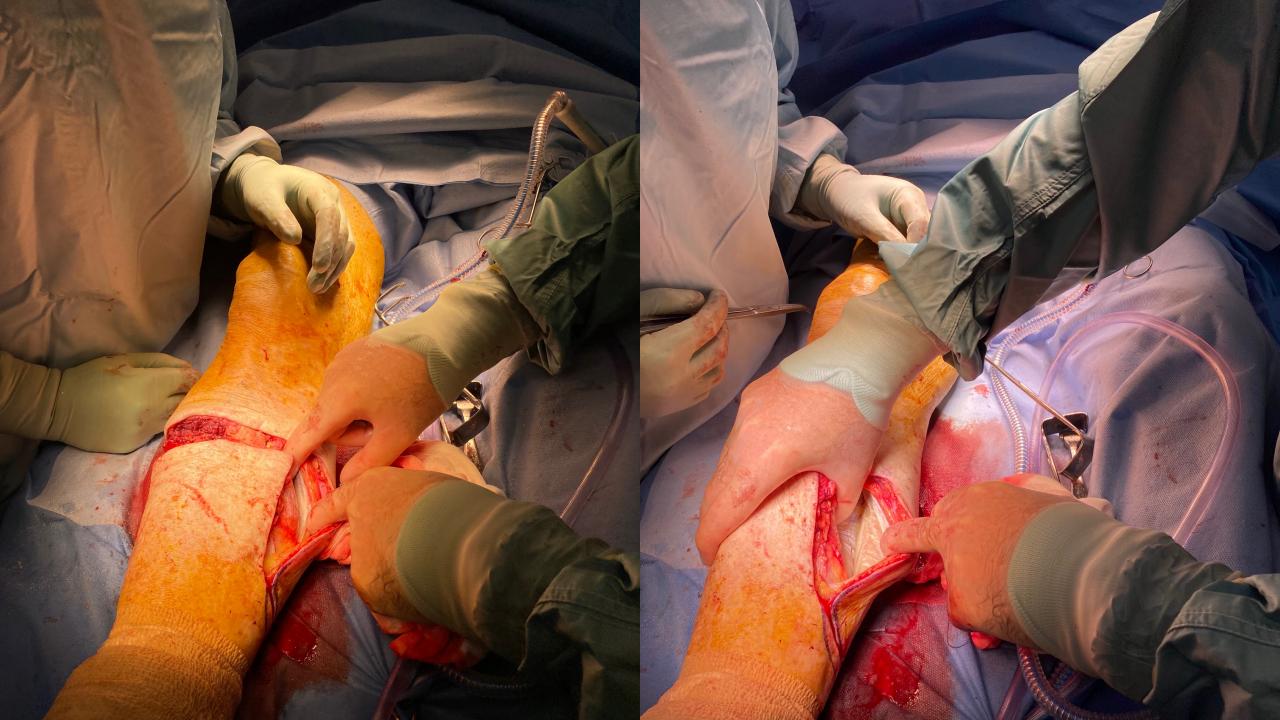




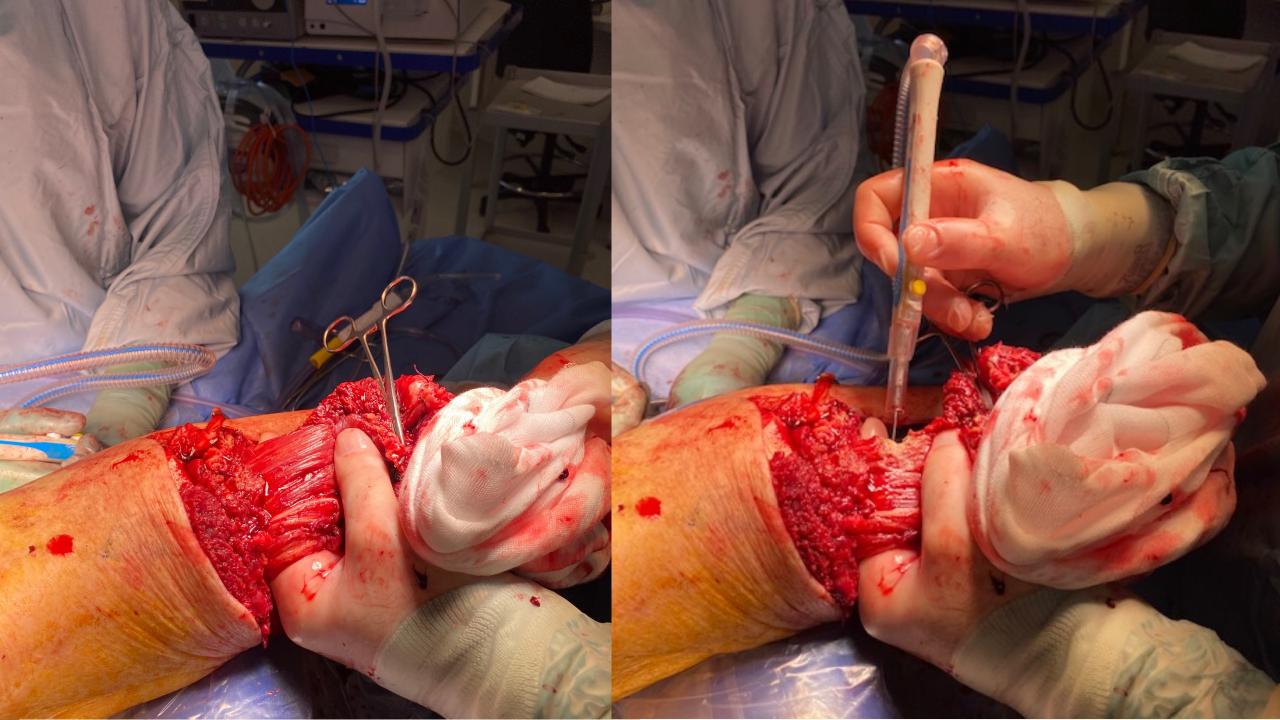




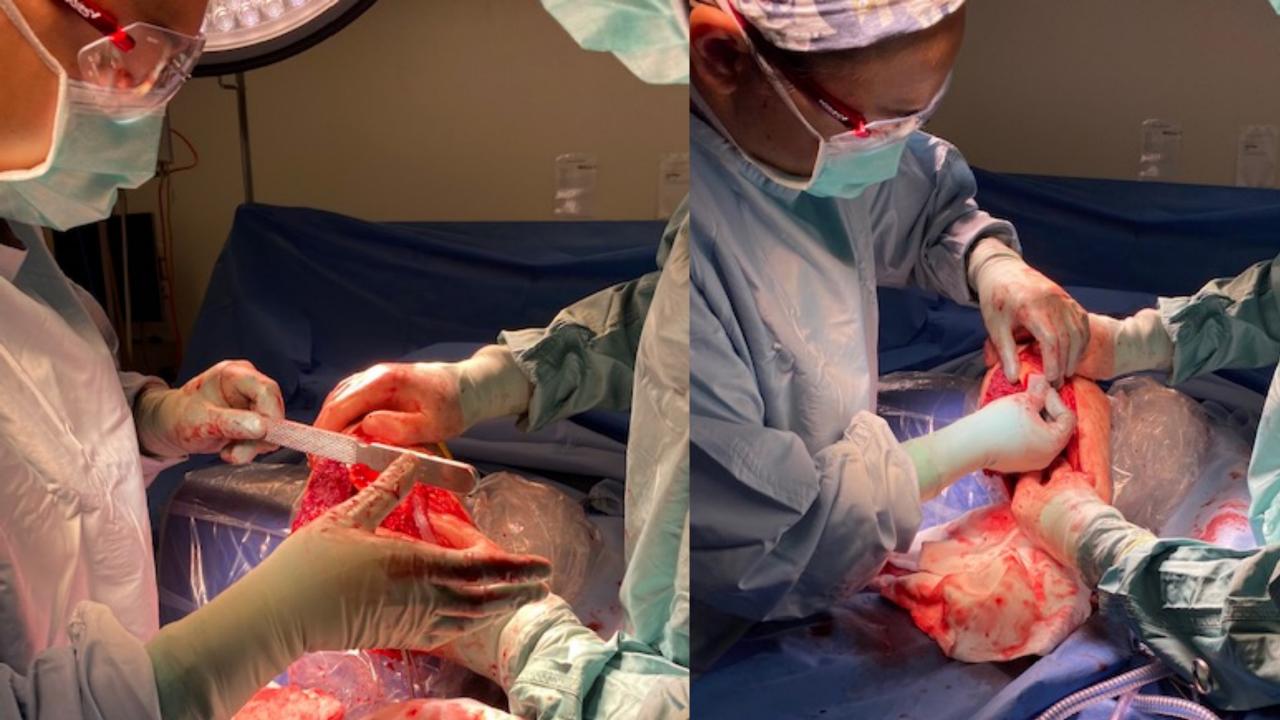






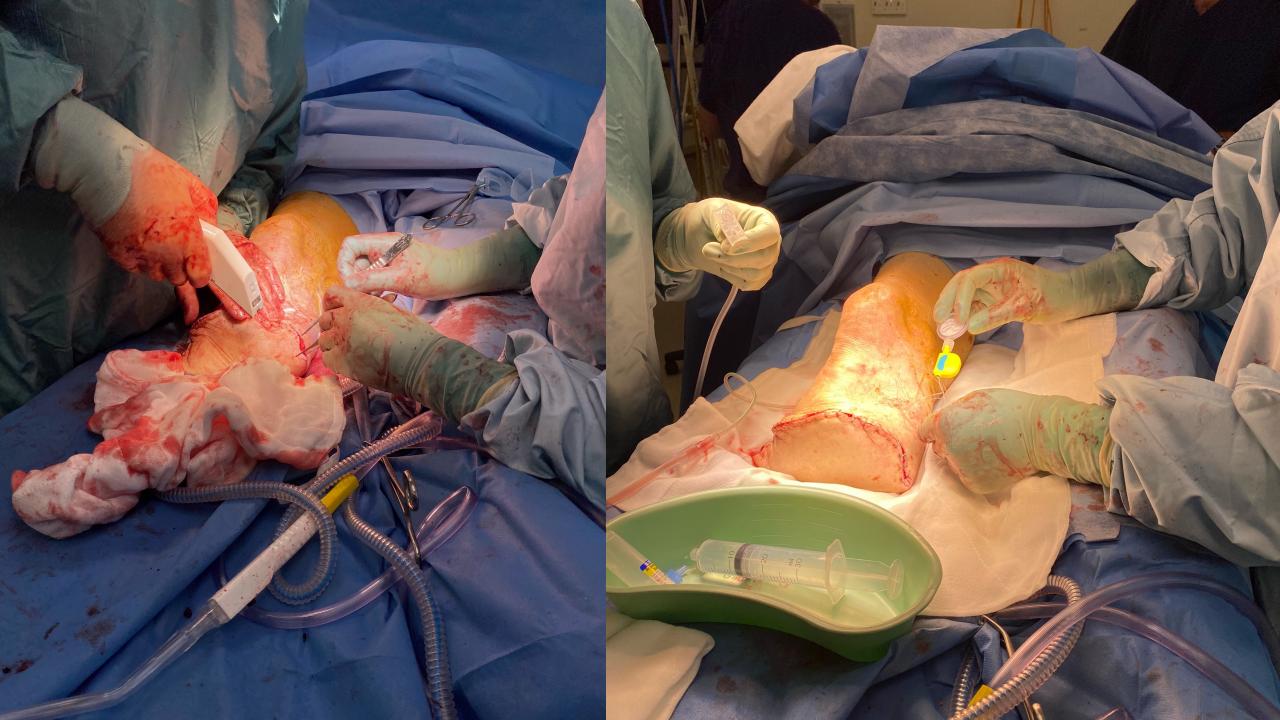


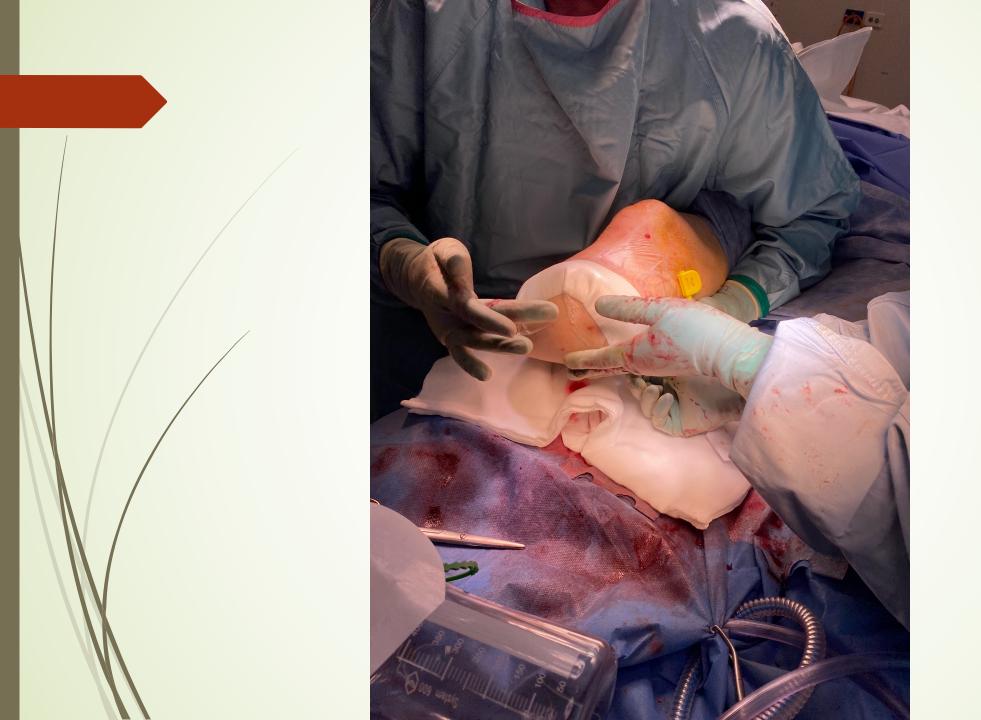
















Happy customer





