Scientific and Medical Illustration
PORTFOLIO

Selected Work 2023-2026

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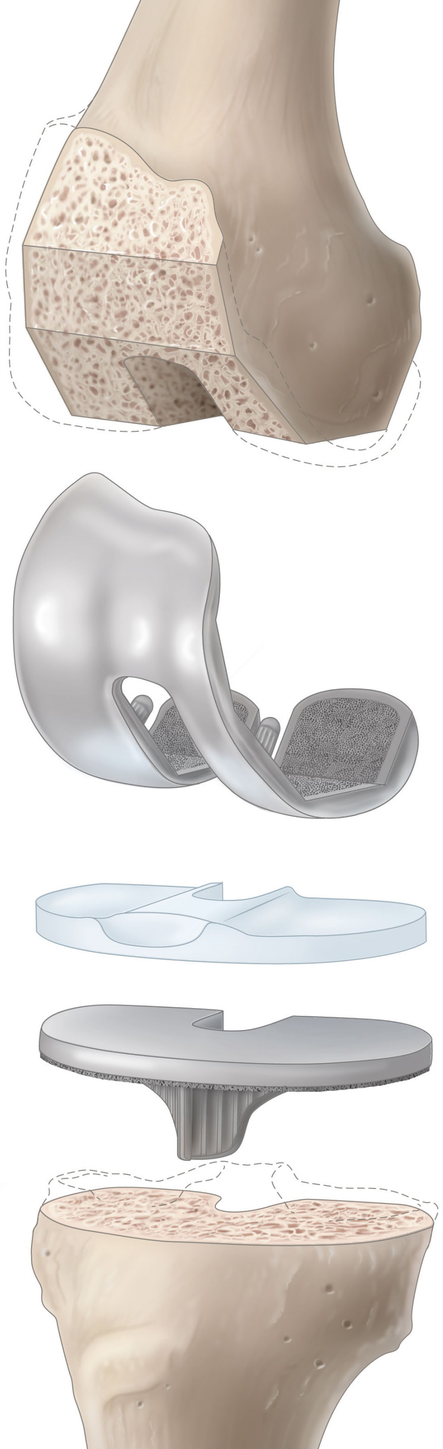

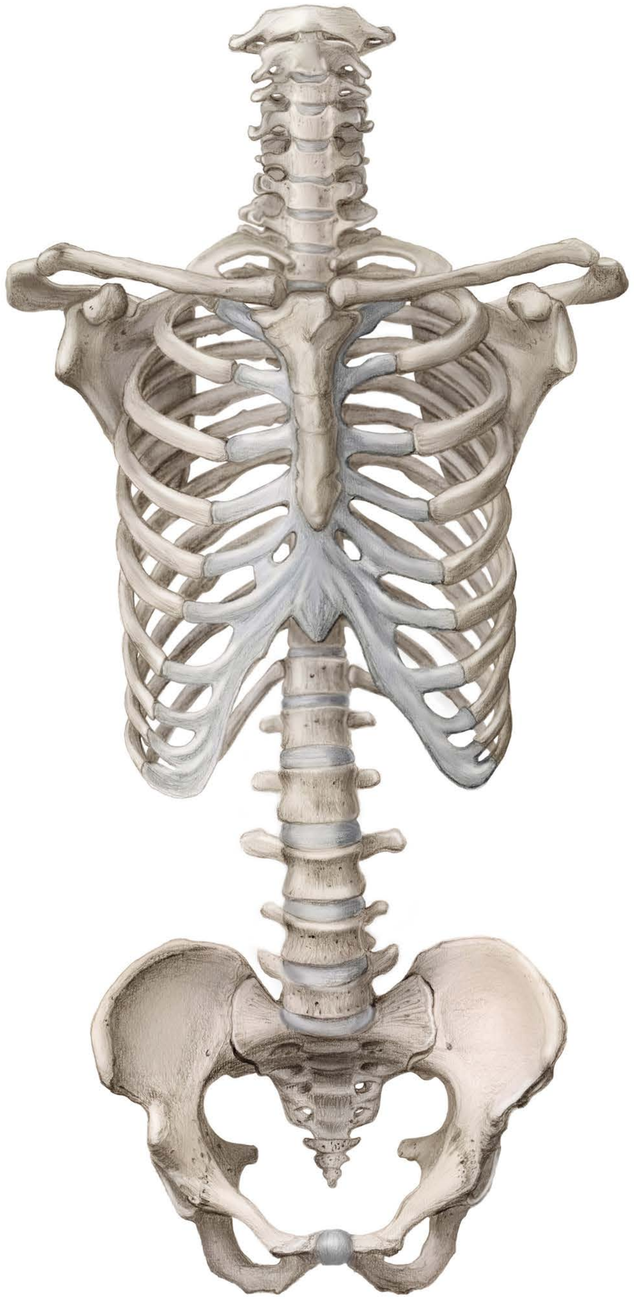

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Case 1
VISUALIZING A MEDTECH COMPLIANCE ECOSYSTEM

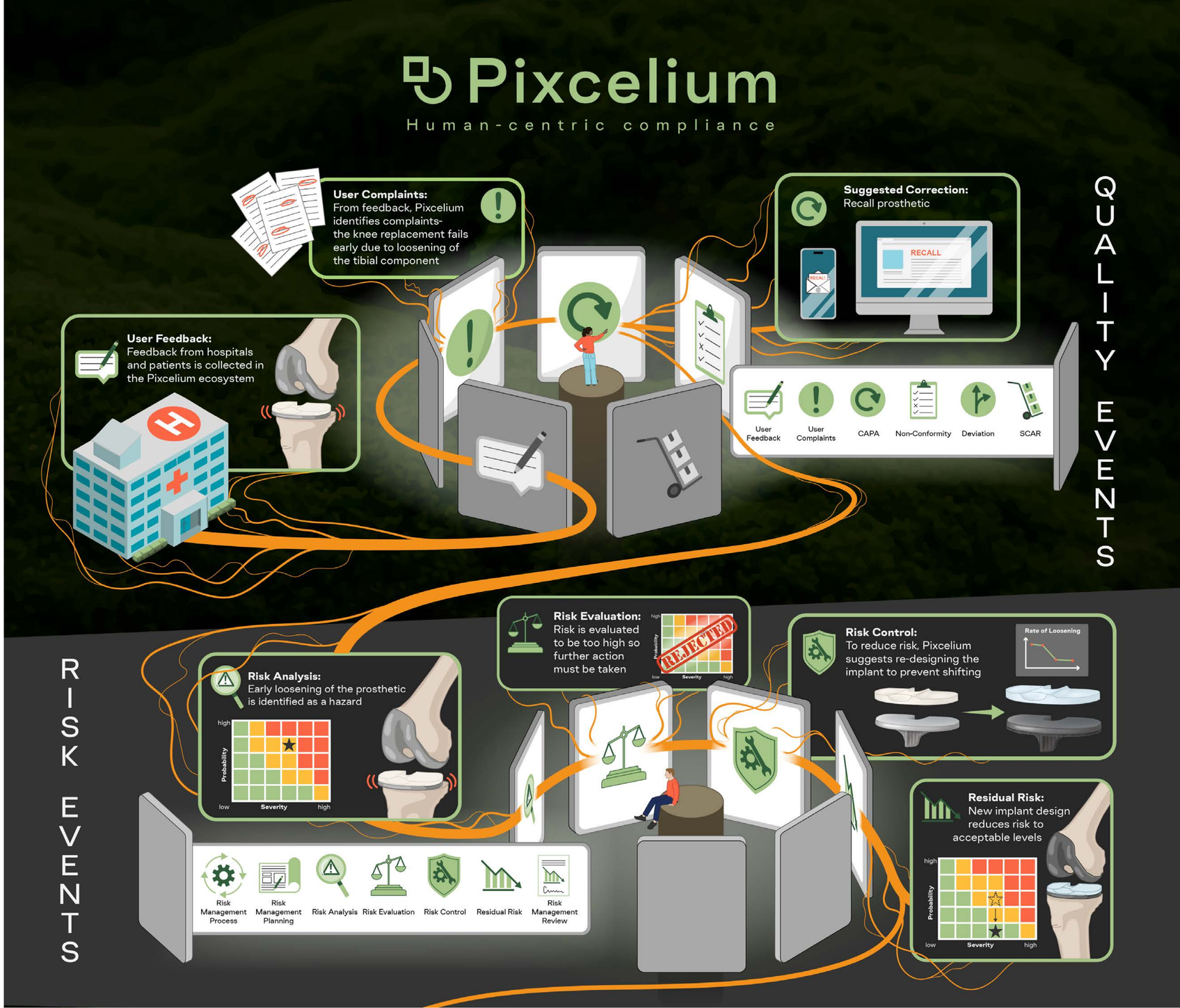
CONTEXT: Startup developing a software ecosystem to support MedTech regulatory compliance.

COMMUNICATION NEED: Explaining a complex regulatory system that involves multiple actors, regulatory frameworks, and data moving across the platform.

AUDIENCE: Investors, regulatory teams, future clients.

VISUAL SOLUTION: System level illustration of the compliance ecosystem that depicts regulatory processes at the quality events level

OUTCOME: Investors quickly understand the product, clients grasp the workflow and value proposition, teams can use the visual as a shared model of the system.



Case 2

EXPLAINING BIOMECHANICS FOR A SMART INSOLE TECHNOLOGY

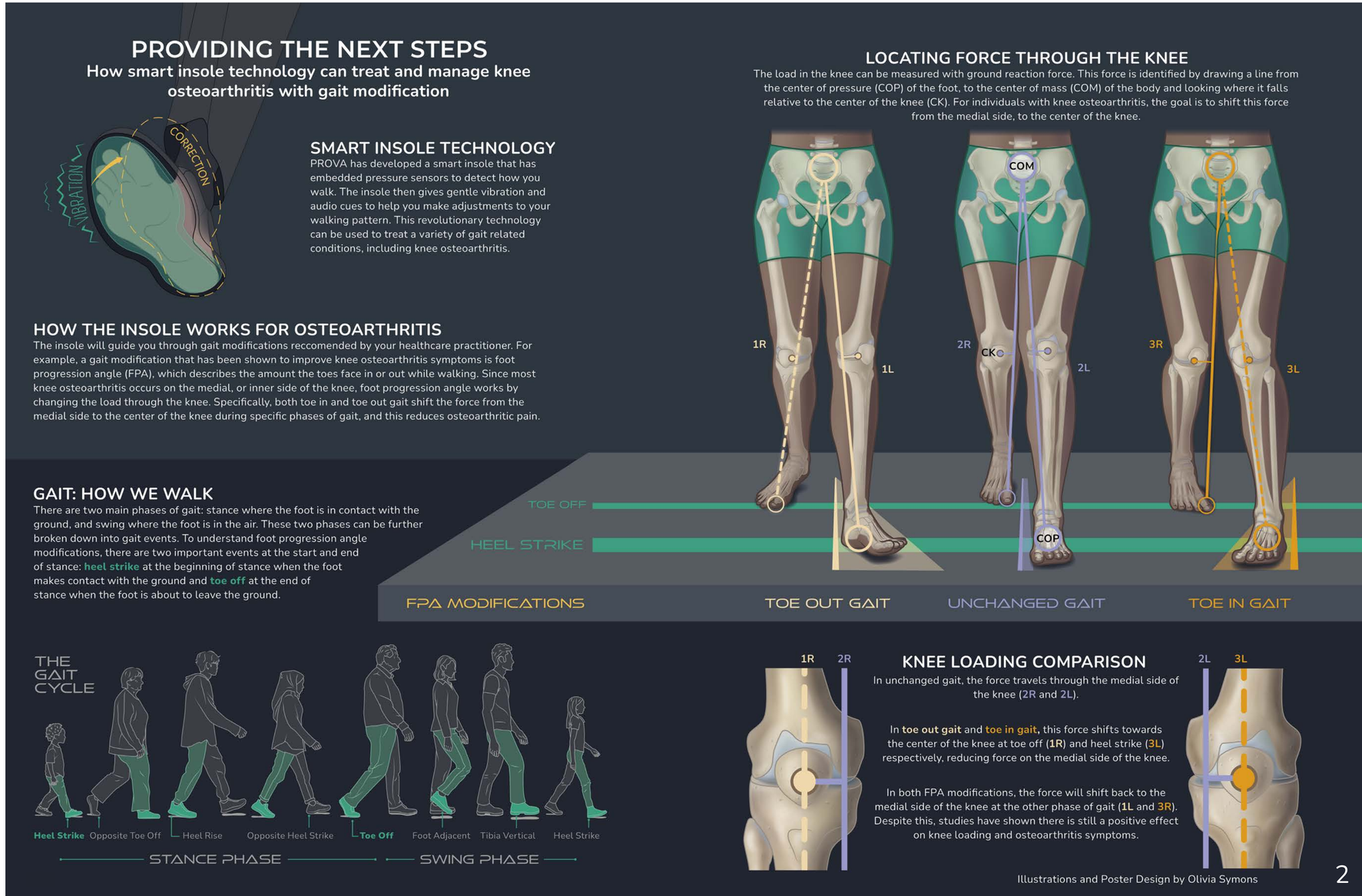
CONTEXT: Startup developing a smart insole to make gait modifications, targeting individuals with knee osteoarthritis to reduce knee loading

COMMUNICATION NEED: Technology relies on a biomechanical concept: changing foot angle during walking alters force distribution within the knee joint. Most audiences lack biomechanical expertise and the benefit may not be immediately obvious.

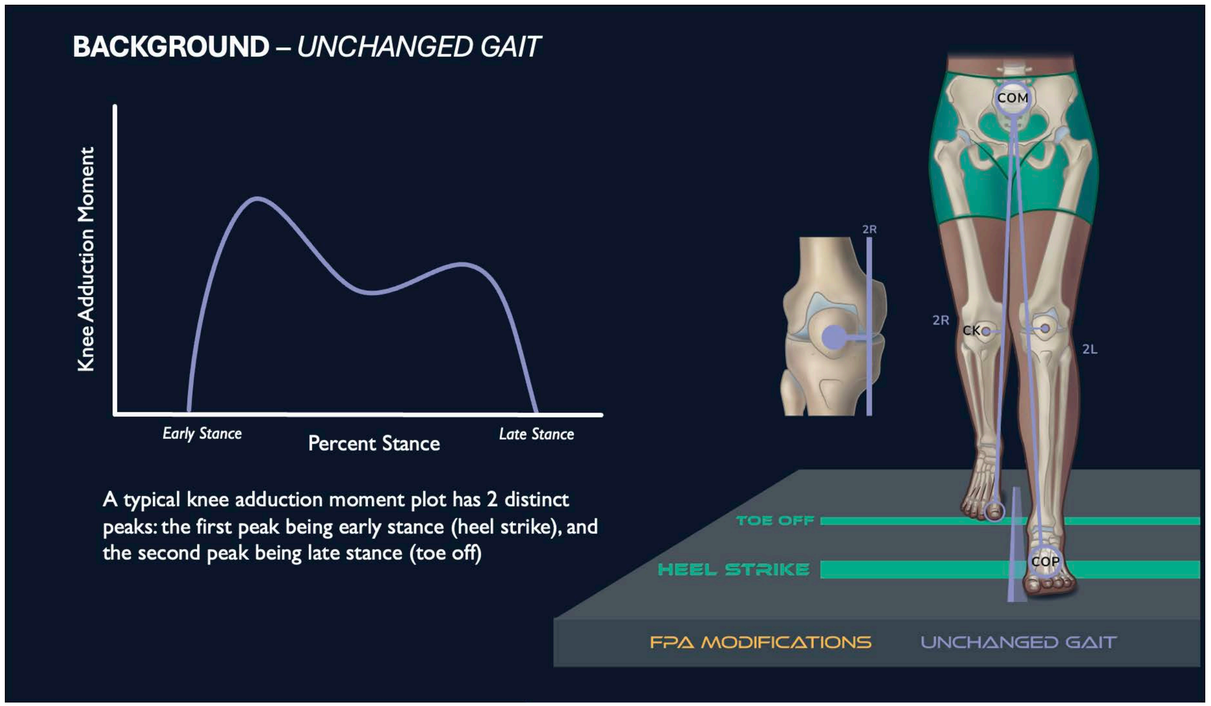
AUDIENCE: Investors, clinicians, patients.

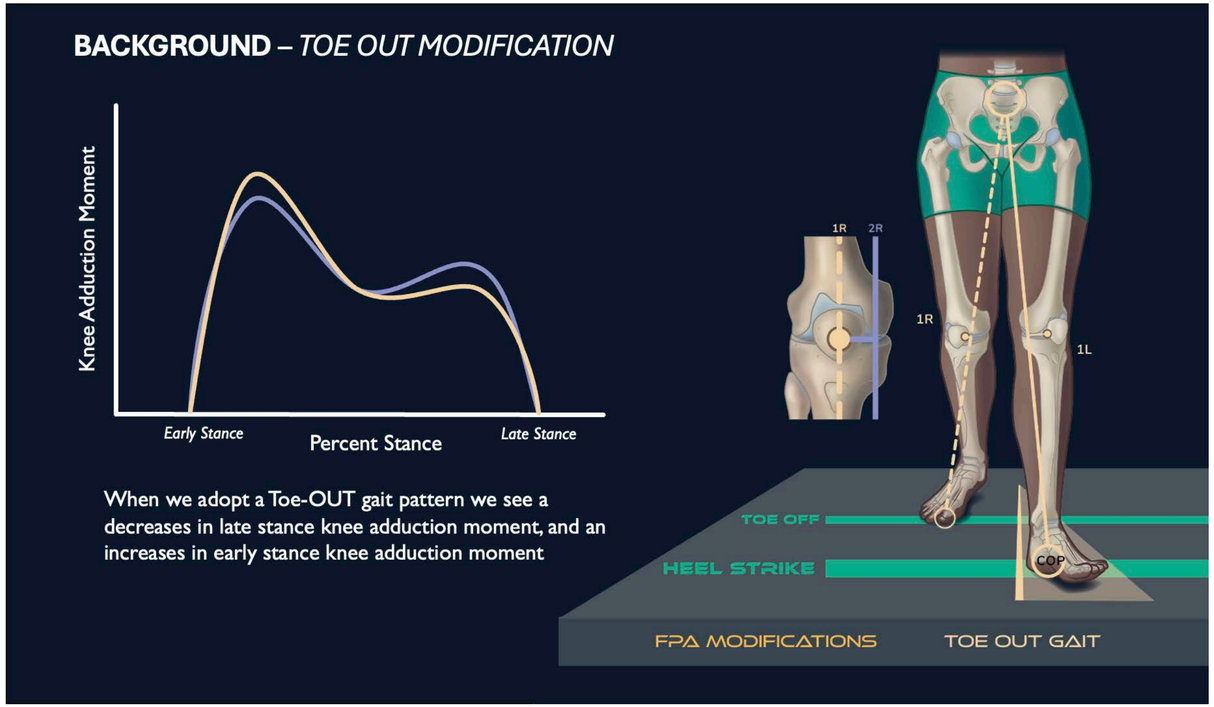
VISUAL SOLUTION: Illustration comparing toe-in and toe-out gait patterns to unchanged gait. This shows how force distribution shifts from the medial knee to the center to alleviate knee pain.

OUTCOME: Investors quickly understand the mechanism, clinicians can understand the therapeutic approach, and patients understand the intervention.



Case 2
PITCH DECK EXAMPLE





Case 3

VISUALIZING SURGICAL SYSTEMS AND PROTOTYPE TECHNOLOGIES

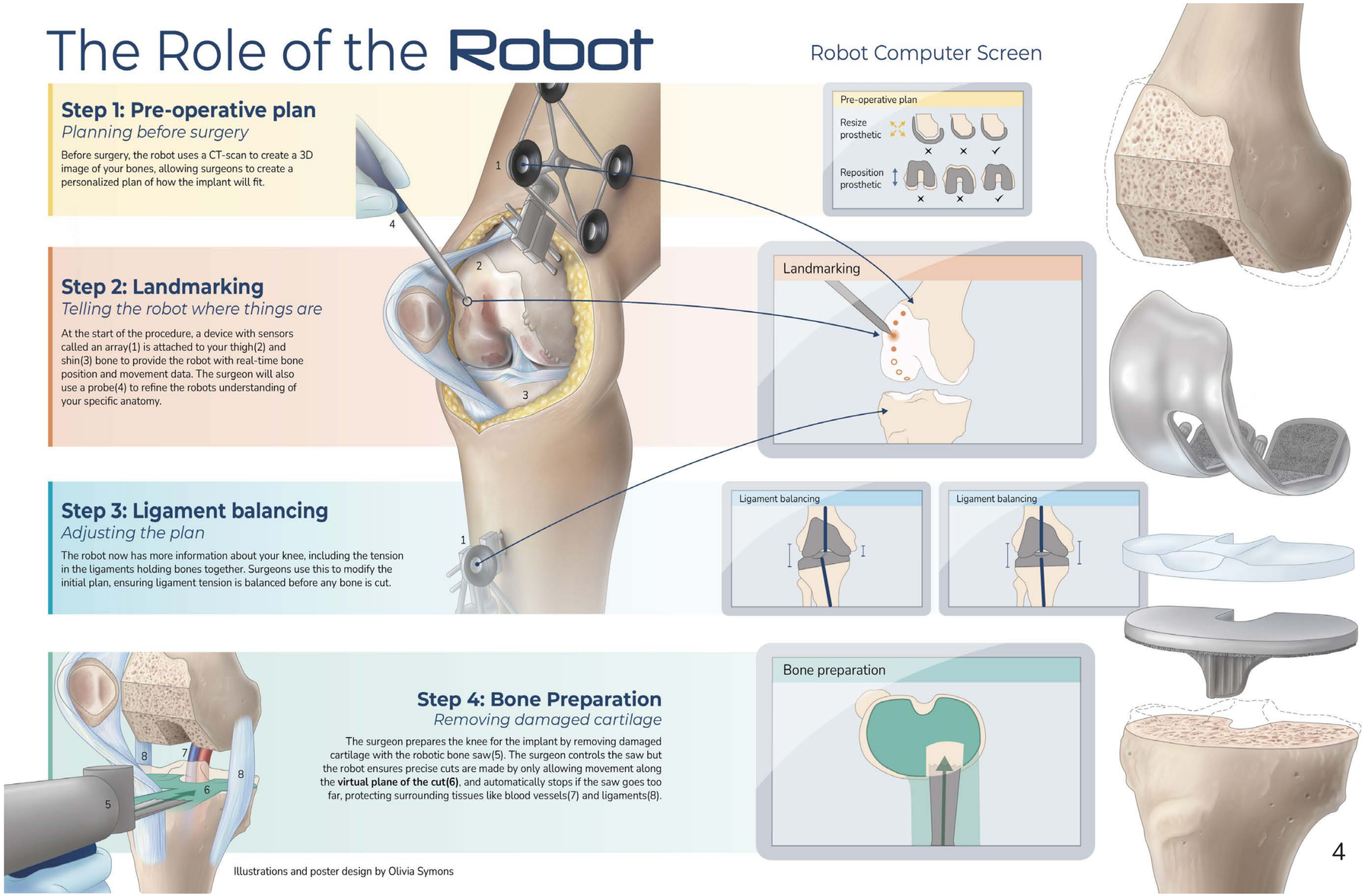
CONTEXT: Robotic systems combine surgical tools, navigation sensors, and computer modeling to assist surgeons.

COMMUNICATION NEED: It can be difficult to understand how complex medical technologies work in practice. This is also a challenge for emerging medical technologies and prototype systems where the final product or clinical workflow may not yet exist.

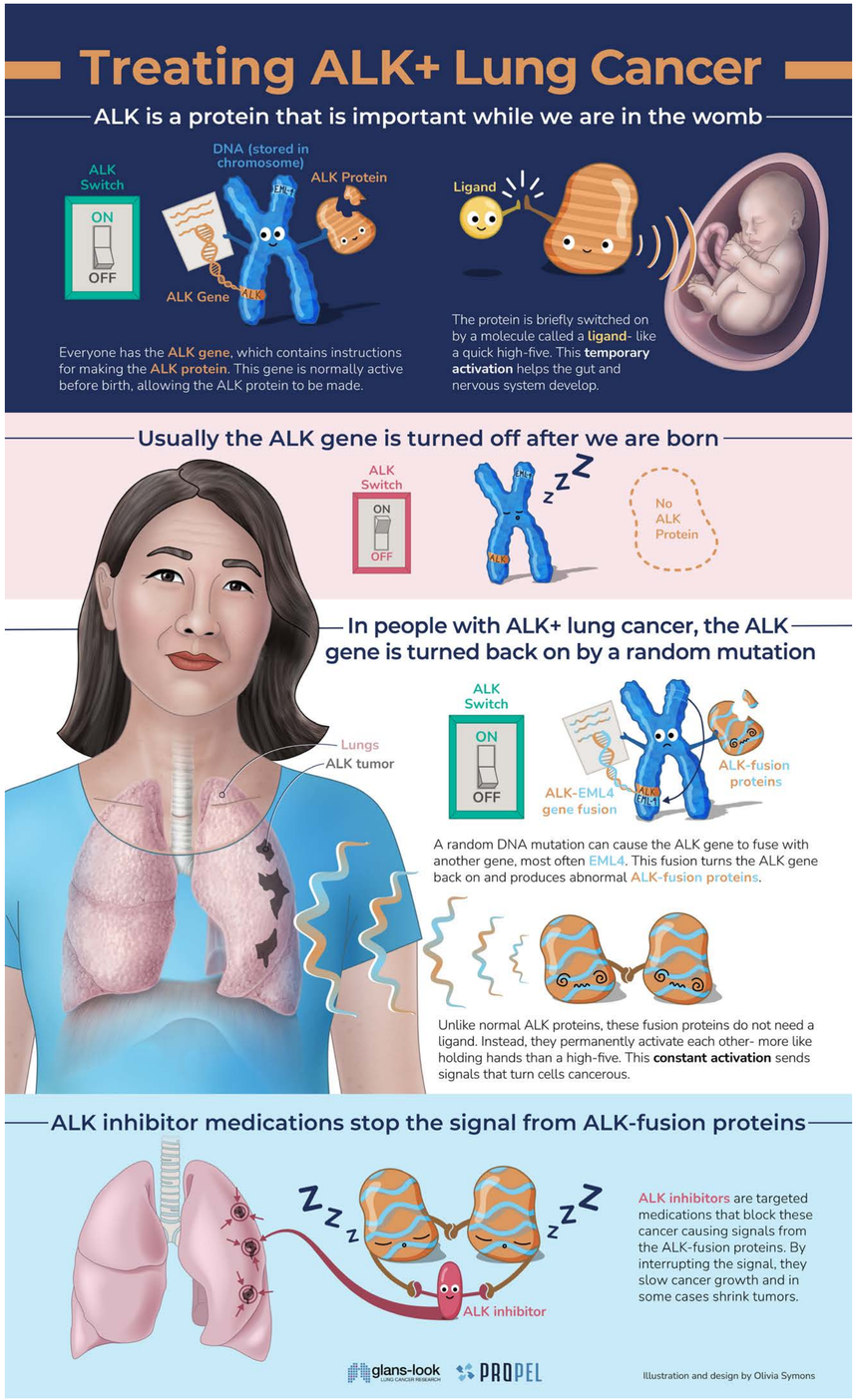
AUDIENCE: Investors, surgeons, hospital decision makers, device developers.

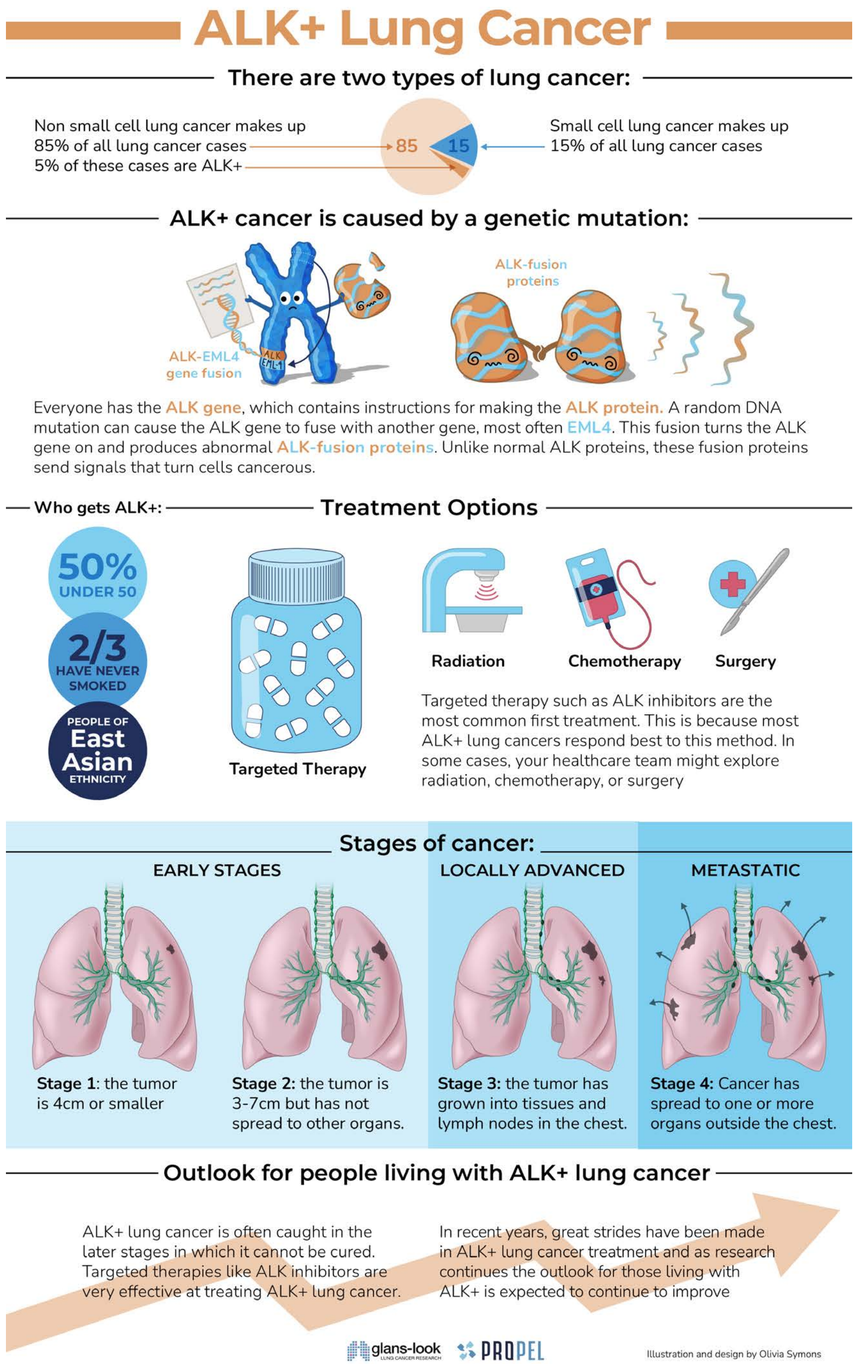
VISUAL SOLUTION: Illustrated surgical workflow showing how the probe attaches to the bone, how the anatomical data is registered, and how the computer system guides surgical decisions and protects key structures. The same approach can be used to visualize prototype technologies.

OUTCOME: Clinicians and hospital decision makers understand new technologies, and emerging technologies or prototype scan be clearly communicated before final development.



PATIENT
EDUCATION





ALK+ Lung Cancer
2026
Patient education material created for Glans-Look research group from the University of Calgary. Infographics explain ALK+ lung cancer facts and biology to a patient audience.
Graphite pencil, Adobe Photoshop, Adobe Illustrator

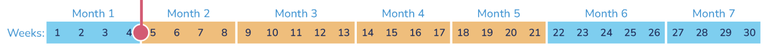
PATIENT EDUCATION

Fatigue

tiredness not relieved by rest

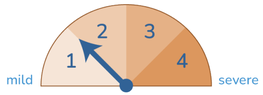
When does fatigue start and how long does it last?

On average, fatigue begins **1 month** after starting treatment, and often last for **4 months**.



How serious is it?

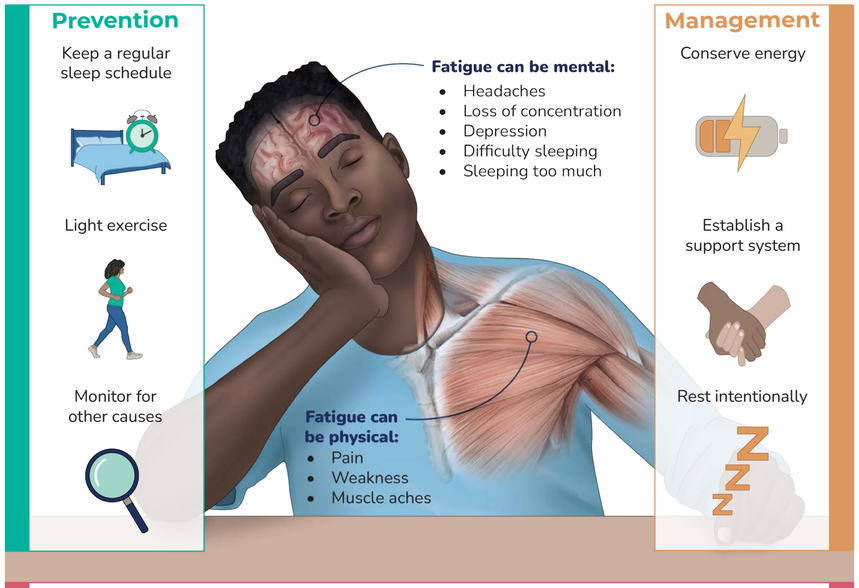
The severity most often experienced is grade 1 or 2



How likely is it that I will experience fatigue?

Lorlatinib	Alectinib	Crizotinib
27% of people will experience fatigue	25% of people will experience fatigue	29% of people will experience fatigue

Symptoms of Fatigue



Emergent Symptoms: Seek Medical Care

- Sudden, severe weakness
- Fainting or passing out
- New confusion or very hard to stay awake
- Chest pain
- Trouble breathing
- Sudden trouble talking, seeing, or moving one side

glans-look LUNG CANCER RESEARCH PROPEL

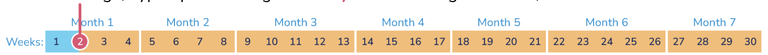
Illustration and design by Olivia Symons

Hyperlipidemia

high cholesterol or triglyceride (fat) levels in blood

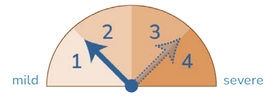
When does hyperlipidemia start and how long does it last?

Lorlatinib is most likely to cause hyperlipidemia.
On average, hyperlipidemia begins **15 days** after starting treatment, and lasts for **15 months**.



How serious is it?

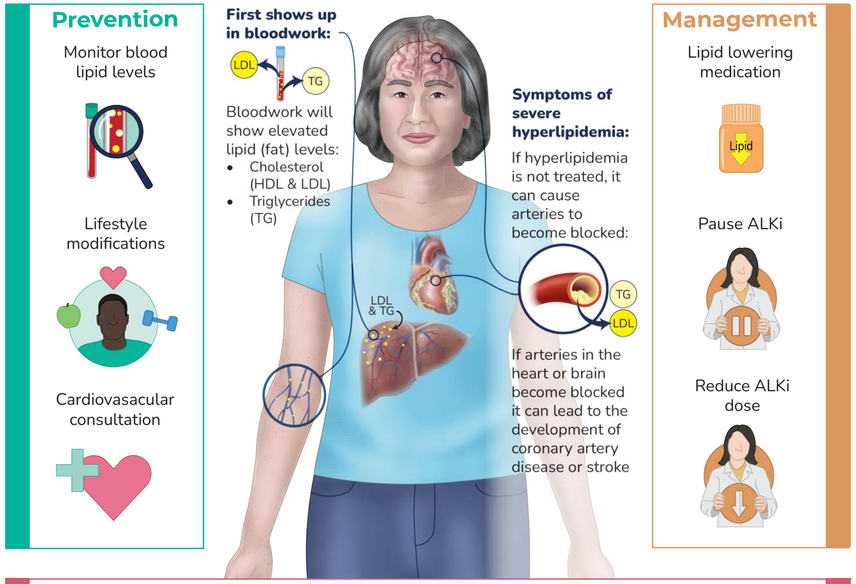
The severity most often experienced is grade 1 or 2 but grade 3 or 4 are possible



How likely is it that I will experience hyperlipidemia?

Lorlatinib	Alectinib	Crizotinib
83% of people require lipid lowering therapy	Hyperlipidemia is uncommon	5% of people will experience hyperlipidemia

Symptoms of Hyperlipidemia



Emergent Symptoms: Seek Medical Care

Signs of possible heart attack:
- chest pressure, pain, heaviness
- sweating
- nausea
- light headedness

Signs of possible stroke:
- F: facial drooping
- A: arms can't be raised
- S: slurred speech
- T: time to act fast, call 911

Signs of possible acute pancreatitis:
- abdominal pain
- nausea and vomiting
- fast heart rate and breathing
- fever

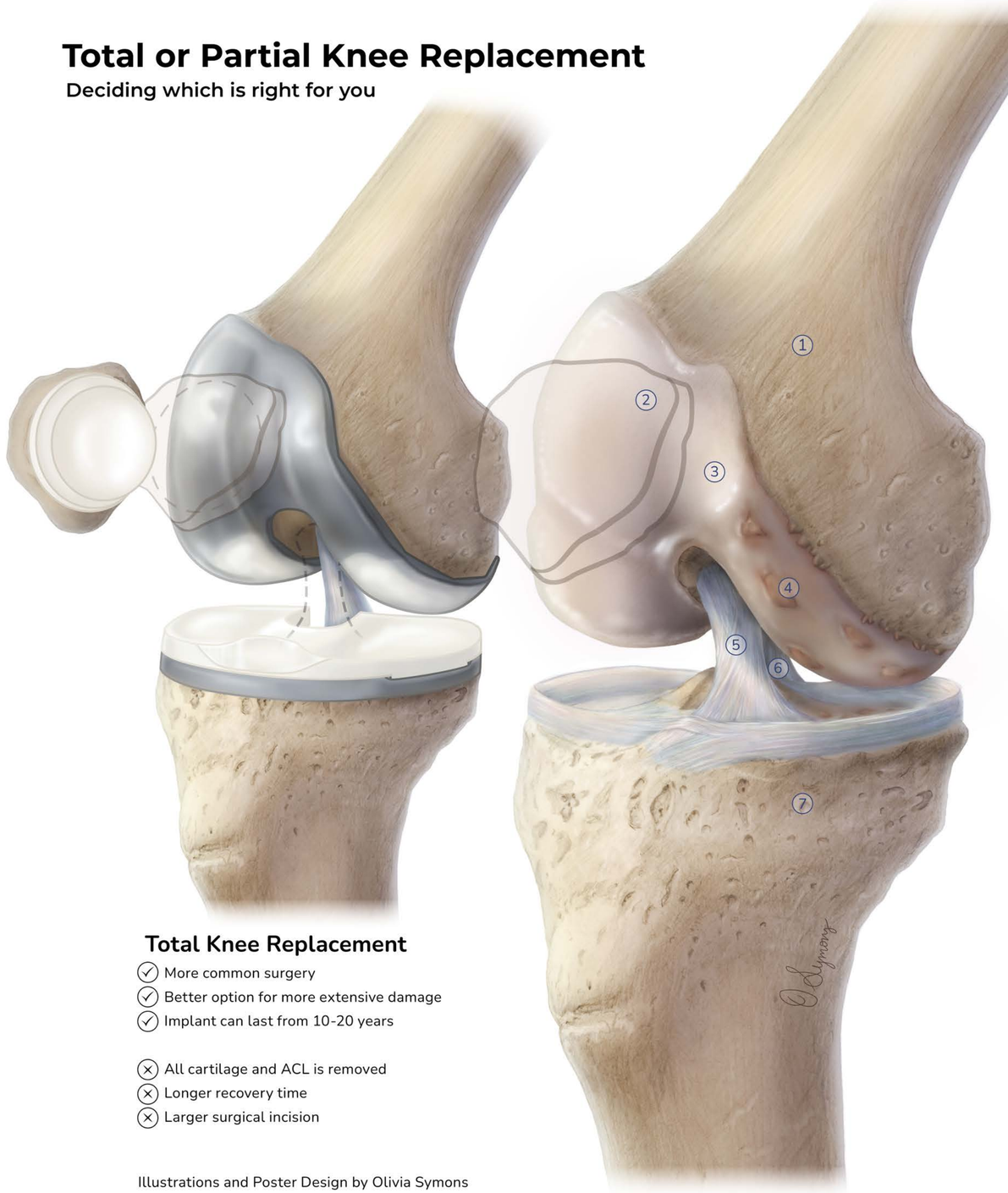
glans-look LUNG CANCER RESEARCH PROPEL

Illustration and design by Olivia Symons

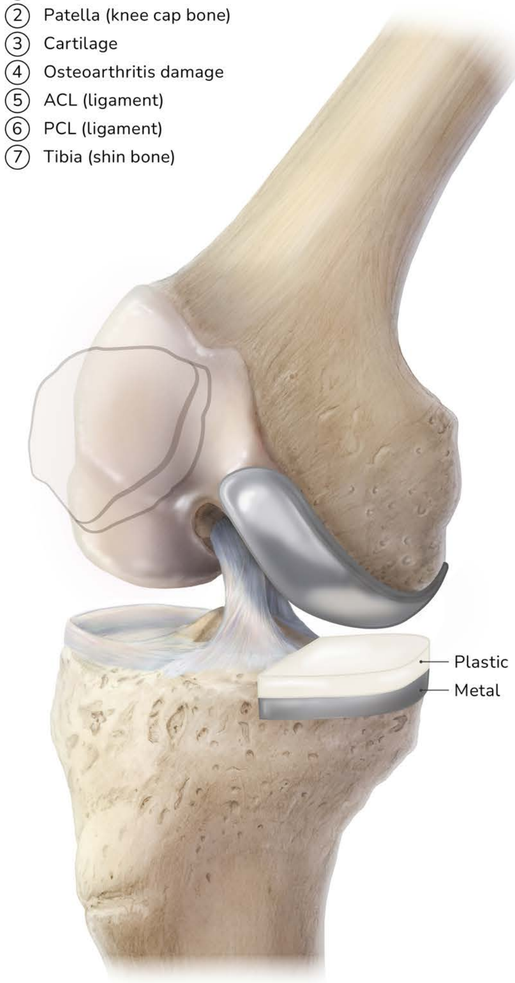
ALK Inhibitor Side Effects
2026
Selected infographics from a series of six patient education materials created for Glans-Look research group from the University of Calgary. Infographics explain comon side effects caused by ALK inhibitor medications in the framework of prevention, management and emergent symptoms.
Graphite pencil, Adobe Photoshop, Adobe Illustrator

Total or Partial Knee Replacement

Deciding which is right for you



1. Femur (thigh bone)
2. Patella (knee cap bone)
3. Cartilage
4. Osteoarthritis damage
5. ACL (ligament)
6. PCL (ligament)
7. Tibia (shin bone)



Total Knee Replacement

- ✓ More common surgery
- ✓ Better option for more extensive damage
- ✓ Implant can last from 10-20 years

- ✗ All cartilage and ACL is removed
- ✗ Longer recovery time
- ✗ Larger surgical incision

Partial Knee Replacement

- ✓ Feels more like a natural knee
- ✓ Shorter recovery time
- ✓ Smaller surgical incision

- ✗ Difficult surgery without robotic assistance
- ✗ Does not always last as long
- ✗ Higher risk of needing a second surgery

Unicompartmental

One compartment is replaced

Medial (inside)

Lateral (outside)

Patellofemoral (top)

Bicompartmental

Two compartments are replaced

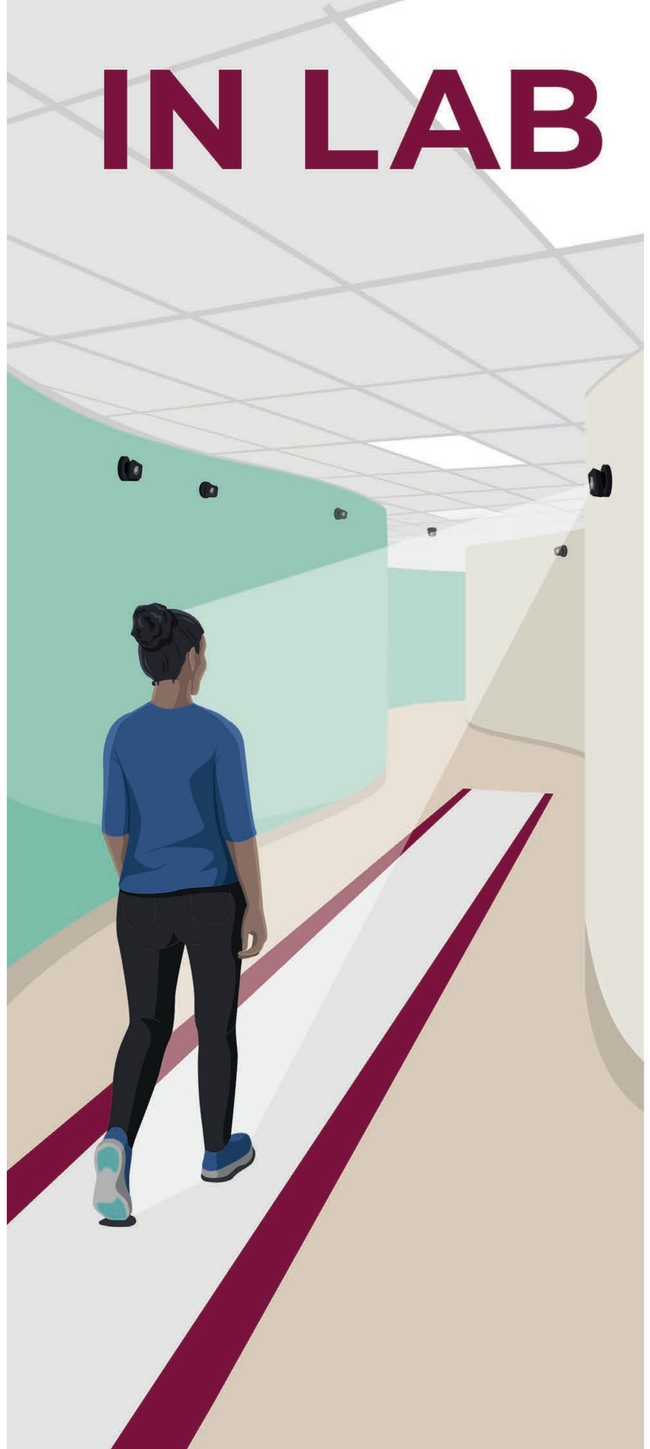
Medial patellofemoral

Total or Partial Knee Replacement
2025
Patient education material created for St. Josephs Healthcare Hamilton as part of my master thesis explaining the differences between total and partial knee replacements to individuals with osteoarthritis taking part in clinical research.
Graphite pencil, Adobe Photoshop, Adobe Illustrator

Illustrations and Poster Design by Olivia Symons

CLINICAL
TRIAL
VISUALIZATION

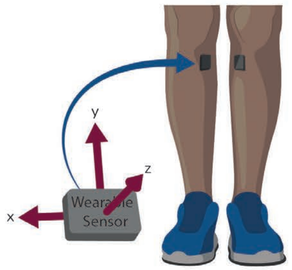
IN LAB



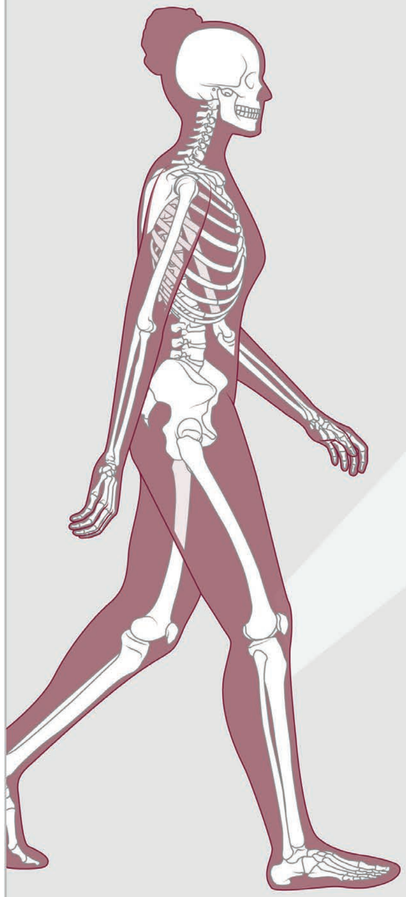
DATA COLLECTION

Video footage is collected in lab and afterwards the Theia 3D software overlays a skeleton which allows biomechanic data to be collected for the functional severity report.

Participants can also agree to wear sensors that collect additional data. These sensors detect movement in three planes of motion (x, y, z) and give a more holistic functional severity report.

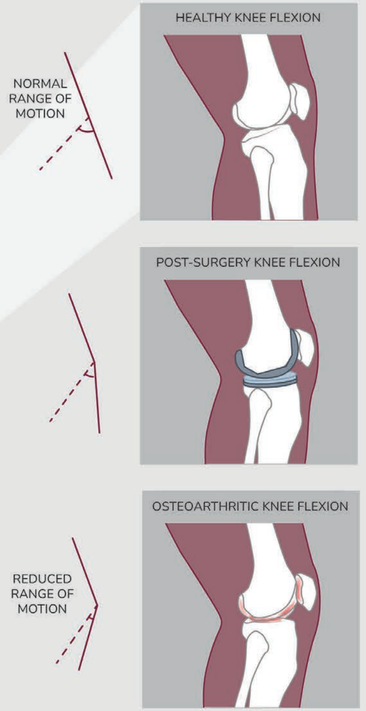


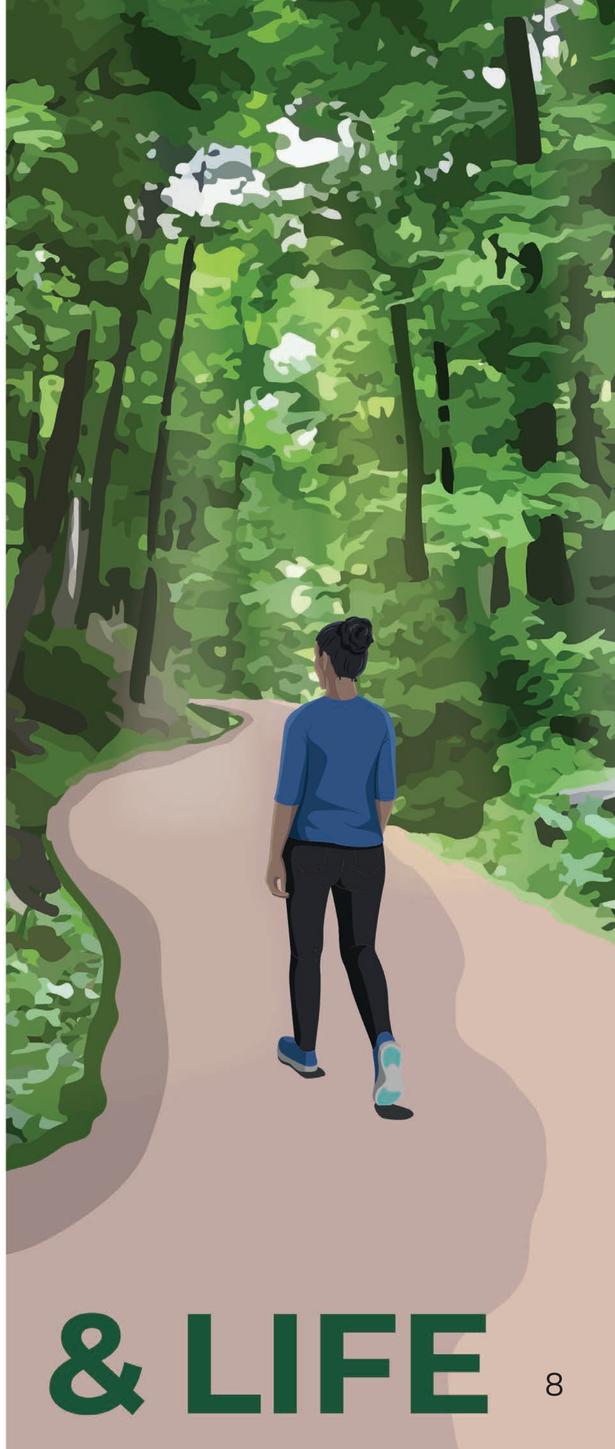
THE FUNCTIONAL SEVERITY REPORT



Over the course of the study, biomechanic data is collected from both healthy, and osteoarthritic participants. If osteoarthritic participants seek surgical intervention, data will be collected before and after knee surgery.

This data allows researchers to study biomechanic parameters, such as knee flexion between the various groups. With this understanding of the biomechanics behind osteoarthritis, researchers can make functional severity reports, and clinicians can implement the findings for more personalized treatment approaches.

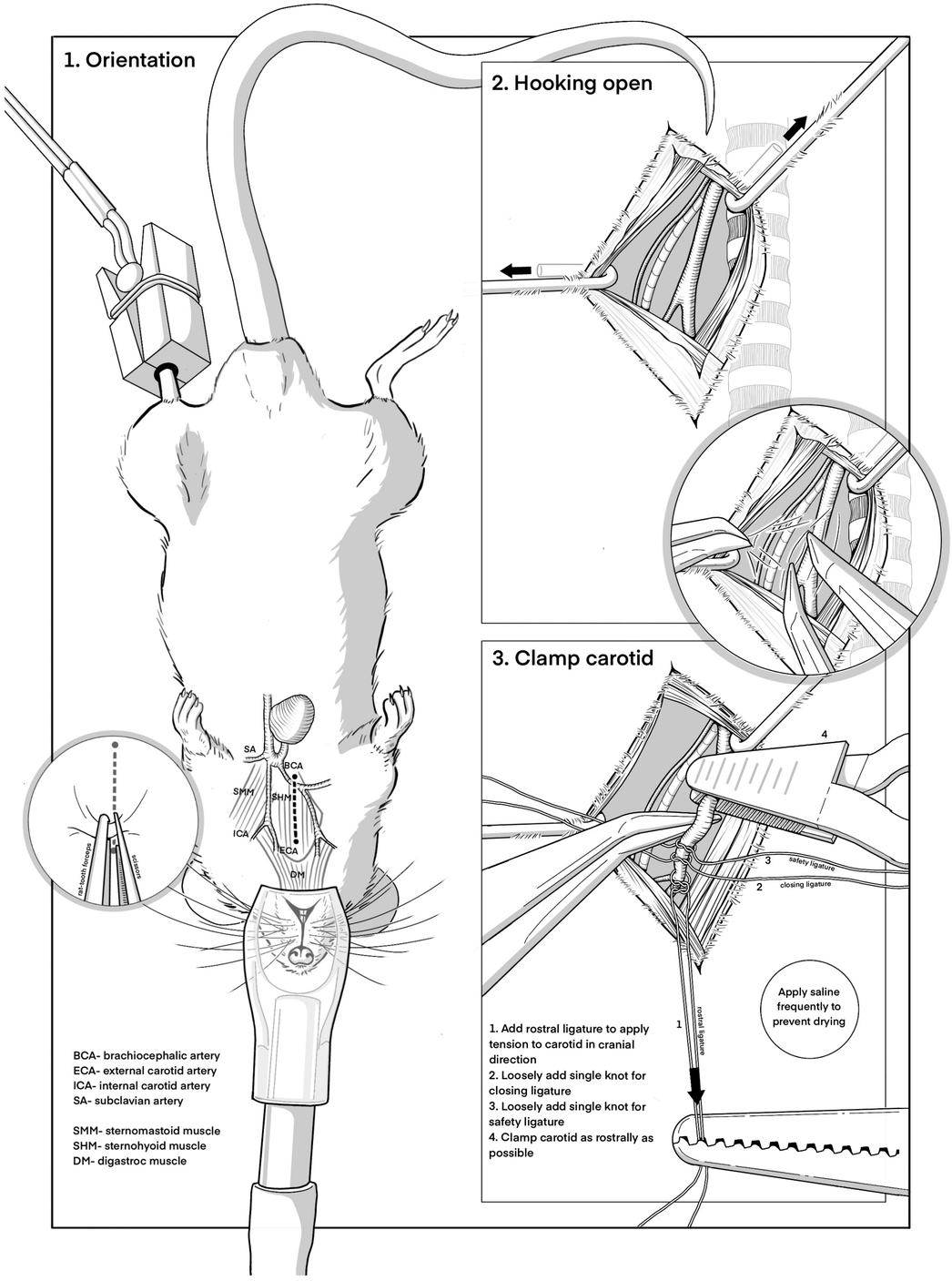


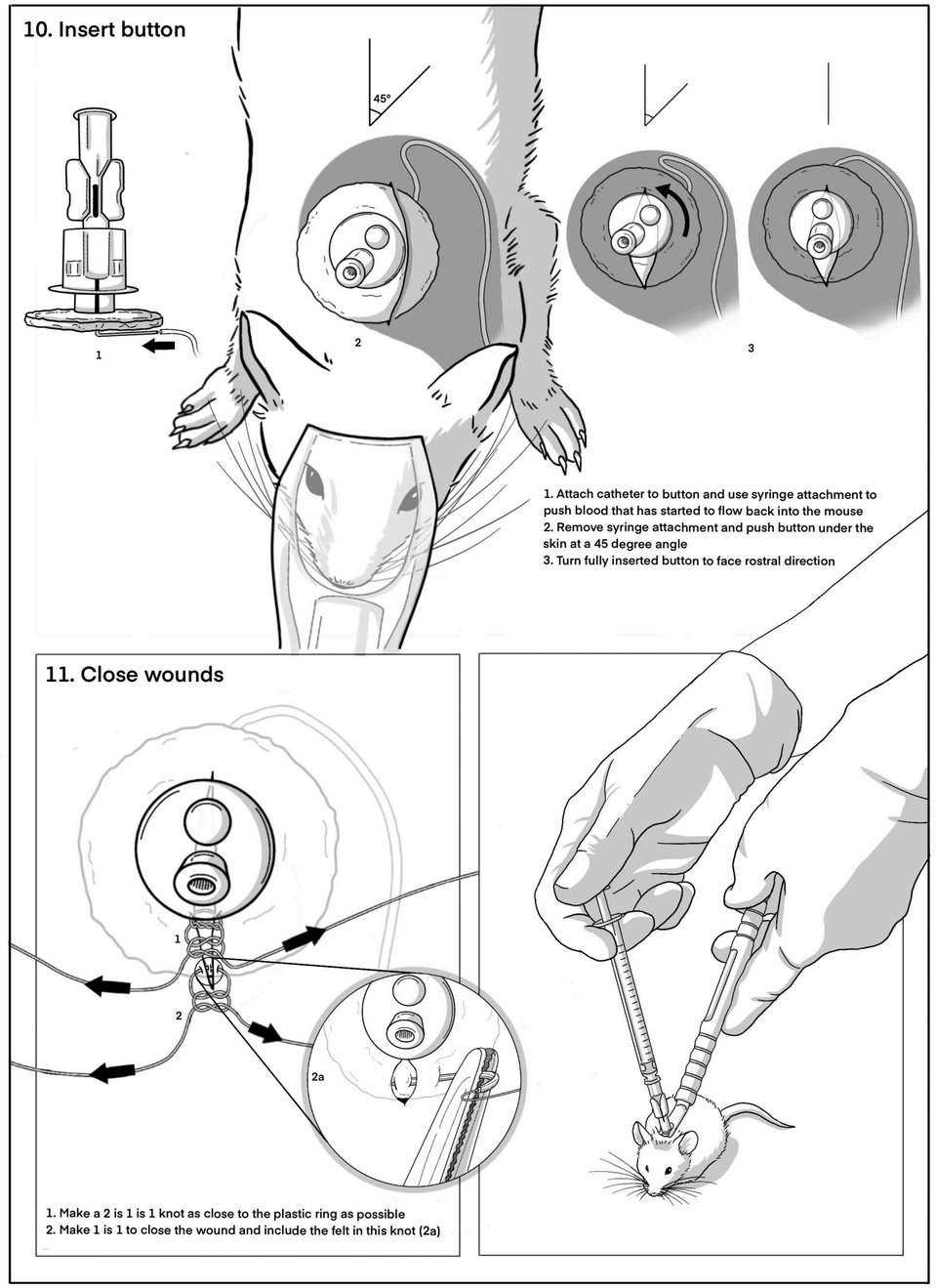


& LIFE

In Lab and Life: Osteoarthritis Functional Severity Report Infographic
2025
Infographic explaining the biomechanic study to participants. With this visual explanation, participants will better understand the research they are supporting and be encourage to participate in the optional data collection “in life”.
Adobe Illustrator

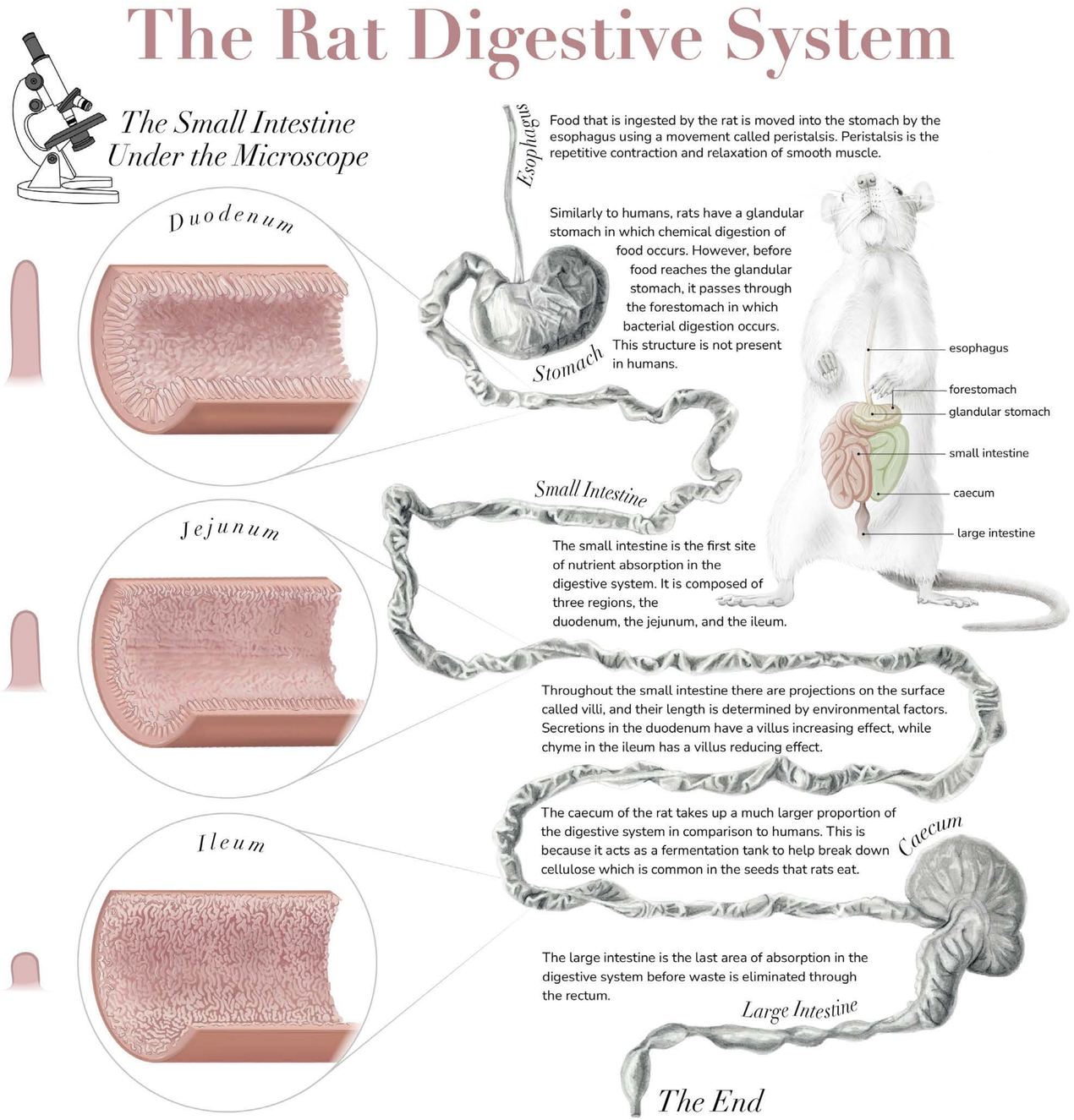
PROCEDURAL ILLUSTRATIONS





Selection of Mouse Microsurgery Manual Steps
2024
Microsurgical procedure of the catheterization of the carotid artery performed on the laboratory mouse. Illustrations were made based on observation of the procedure at René Remie Surgical Skills Center in Almere, NL.
Procreate

MICROSCOPIC LEVEL VISUALIZATIONS



The Rat Digestive System
2023
Poster based on dissection of the laboratory rat highlighting the digestive system. Focus is placed on the small intestine and how villi size changes throughout based on cross-sectional observations under the microscope.
Graphite pencil, Procreate, Adobe Illustrator, Adobe Illustrator

Lets Work Together

THANK YOU

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