BACKGROUND: Knee replacement or arthroplasty is a common practice in orthopedic surgery and traditional methods provide a 90 percent survivorship. Normally, knee surgery is done with a variety of cutting jigs and guides that help surgeons to place the knee. The surgery involves cutting away damaged bones and cartilage and replacing them with a prosthetic joint made of plastics and metals and is mainly meant to treat those suffering from osteoarthritis pain. This surgery not only relieves pain but also restores functions that made have been limited due to the pain or stiffness.

(Source: Dr. Yair Kissin, MD, Orthopedic Surgeon, Hackensack University Medical Center
https://www.mayoclinic.org/tests-procedures/knee-replacement/about/pac-20385276)

OSTEOARTHRITIS: Osteoarthritis, or “wear and tear” arthritis, is the most common type of arthritis that typically presents in the hands, hips, and knees. This disease causes joint cartilage to break down and change the underlying bone. The usual symptoms are stiffness, pain or aching, swelling, and a lessened range of motion; they tend to develop slowly but increase over time. Osteoarthritis is usually caused by joint injury or overuse, but can also be affected by things like age, weight, and genetics.

(Source: https://www.cdc.gov/arthritis/basics/osteoarthritis.htm)

NEW TECHNOLOGY: With all the advancements in surgery over the years, it may be surprising that many patients are still stuck trying to conform their recoveries and bodies to a one-size-fits-all approach. While surgeons may use guides for alignment and placement, many agree that it is not as accurate as it could be and that a more customized approach would be beneficial for long-term outcomes. The THINK technique allows surgeons to make a detailed pre-operative plan that is verified in surgery, ensuring that everything is matching up to the patient’s personal anatomy. It also allows surgeons to register the patient’s anatomy on a 3D plane to get a comprehensive and holistic view and for machines to assist in more precise cutting and placement.

(Source: Dr. Yair Kissin, MD, Orthopedic Surgeon, Hackensack University Medical Center
https://www.yalemedicine.org/stories/3d-joint-replacement/)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com