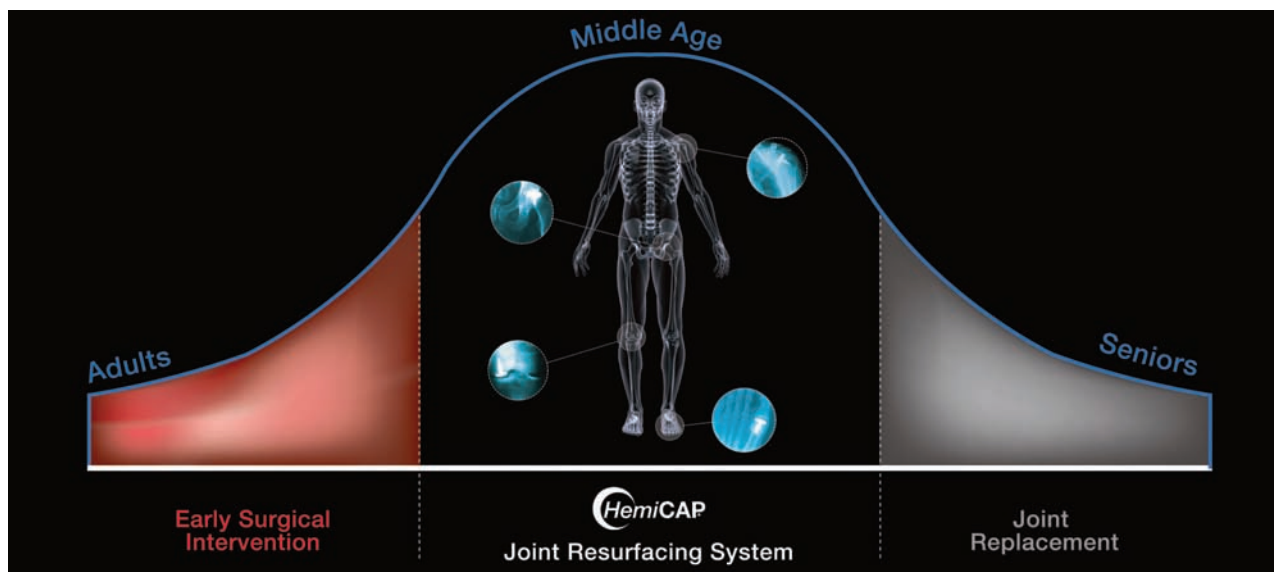


Innovation for the middle aged patient



Almost every day patients have pain during or after sports or even from work and are too young to be considered for a total or partial joint replacement. The challenge in these patients is to get them back into their normal daily activities, sport and work without an extensive rehabilitation period. Arthrosurface Inc, distributed by local South African company Surgitech (Pty) Ltd, has an option for the treatment of these patients that have had a previous knee arthroscopy or meniscal repair and may be looking for that “next” treatment?

Orthopaedic surgeons globally are using an implant system that has been designed specifically to treat these early stage cartilage issues in the middle aged and active baby boomer.

The Arthrosurface® HemiCAP® resurfacing system is a comprehensive surgical solution for the treatment of lesions and defects in the body’s weight bearing, non-weight bearing and extremity joints. The system is comprised of three elements:

- A family of “patient matching” cobalt chrome articular implants;
- A central fixation component; and
- An instrument set used to map the joint surface, prepare the joint/bone and implant the prosthesis.



The HemiCAP® system precisely aligns the surface of the implant to the contours of the patient’s articular surface, filling the defect and restoring a smooth and continuous joint surface.

The implants are designed to match the surface and contours being restored. The instruments and techniques apply to any joint surface, spherical, aspherical, convex, concave or convex-concave.

The procedure is intuitive and easy to learn. Because the tools and techniques are identical for each joint, the procedure can be performed by the same surgeon on multiple joints with a minimal learning curve.

One component of the HemiCAP® system is a set of re-usable instruments that are used to map and prepare the defect sites for receipt of the implant. The HemiCAP® implants come in a variety of sizes and curvature profiles designed for the different surface anatomies. Arthrosurface® continues to design and develop products to address other painful joints of the body.

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HemiCAP® System Advantages for the Patient

- HemiCAP® technology was designed for patients who live longer, continue working, and retain more active lifestyles, and have an increased need for joint preserving treatments
- New treatment option that bridges gap between “first-line” therapies and total joint replacement
- Clinical studies demonstrate early positive clinical outcomes across different joints
- Patients report outstanding pain relief, rapid recovery times and significant range of motion improvements in multi-center studies
- Procedure may be performed on outpatient basis
- HemiCAP® allows for preservation of the joint and surrounding bone and maintains existing joint biomechanics, thereby allowing normal motion

HemiCAP® System Advantages for the Surgeon

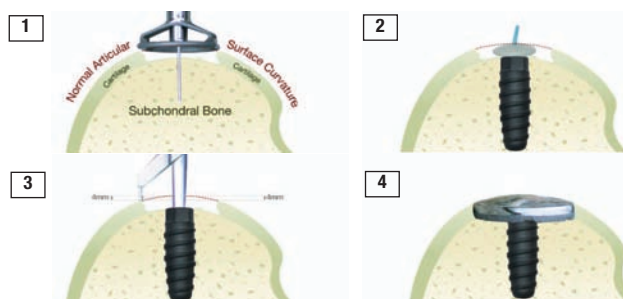
- Short learning curve
- Intuitive, universal, reproducible procedure across multiple joints
- Minimally invasive/outpatient procedure: typically, procedures can be performed in approximately one hour
- Maintains soft-tissue envelope, normal joint mechanics and preserves future surgical options
- Preserves skeletal anatomy and therefore does not preclude more aggressive treatment such as a total joint replacement

Surgical Technique

The HemiCAP® implants are comprised of two parts: an articular cap and a fixation component. The articular component is a rounded, cap-like implant made from a cobalt chrome (CoCr) alloy with a central post on its underside. Cobalt chrome is a material that has been used in total joint reconstruction devices for over two decades. This material has proven to provide a safe, effective and strong weight-bearing surface in joints. This metal alloy exhibits lubricious qualities very similar to articular cartilage when implanted in a joint.

The fixation component looks like a screw and is made of Titanium (Ti), another material that has been used in orthopaedics for decades. The two components are connected together via a Morse taper which is a very secure method of fixation.

The HemiCAP® surgical procedure begins when an articular defect is confirmed. The diameter of the defect is determined and a guide wire is introduced into the middle of the defect. The fixation component is implanted to establish the mechanism for anchoring the articular component. Using the fixation component as a central axis, specially designed instruments are used to map the contours of the patient’s articular cartilage surrounding the defect and to prepare the tissue in and around the defect for the resurfacing implant. Once the site is prepared, the HemiCAP® resurfacing implant is brought into position and seated.



1. Define cartilage lesion size. 2. Set original joint height. 3. Map surface curvatures in both planes. 4. Restore a congruent surface.

The Arthrosurface system utilizes metal and polyethylene implants that are used in a similar way a dentist places a filling into a tooth cavity. The idea being that filling in the cartilage defect with an anatomical implant may prevent the spread of damage thereby preserving bone and cartilage in this middle aged patient.

These middle aged patients have maligned kneecaps and a diffuse cartilage defect on their condyle and a “kissing” lesion on the patella. They have passed the age of when a microfracture is an acceptable procedure yet are too young for a TKR and are ideal patients for the Arthrosurface procedure.

The procedure is designed to be very bone and cartilage sparing so it will not “burn a bridge” should future surgery be required years later. The technique is straightforward and allows the surgeon to map the patients’ anatomy during the procedure without having to send the patients’ personal x-rays to an outside company or having to use an expensive robotic system. By matching the implant to the patient rather than the patient to the implant results in an anatomic and inlay system which is crucial to the more active demands of the middle aged patient.

**For additional information contact
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