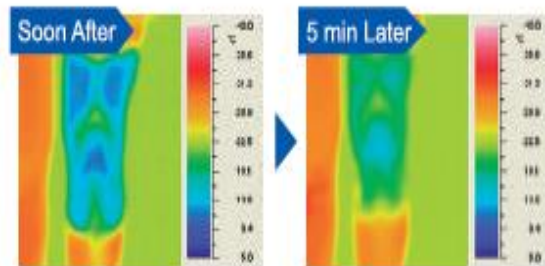


CTC-7
Clinical
background

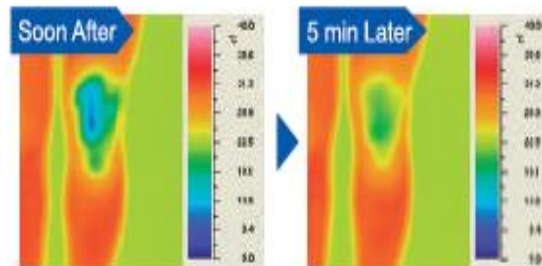
- Since diseases such as osteoarthritis and rheumatoid arthritis decrease significantly in patients' activities and quality of life, we perform artificial knee arthroplasty (TKA) according to the symptoms. The number of surgeries in this hospital is about 700 cases per year, the highest level in Japan.
- Dr. Kikuchi has been actively involved in TKA since decades ago and has advocated the importance of post-operative early-freezing therapy to restore smooth function after TKA. "Cooling Therapy" is a continuous cooling of the affected area after surgery to relieve pain, edema, blood swelling and inflammation of the blood swelling is expected to be effective.
- Dr. Kikuchi has been paying attention to this effect and has devised appropriate cooling method and time setting temperature from clinical experience so far. The way that this effective freezing therapy is being used is the so-called "Continuous cold therapy system".
- After 2 days of operation, the lesion is cooled down to relieve swelling and pain. To this end, the Continuous cold therapy system is used because the device that keeps the set temperature constantly and can cool down is effective. Because it becomes patient's suffering when we cool down to healthy part, Dr. Kikuchi also invented effective mounting method which relieves suffering of patient by putting pads on knee's lesion in trial and error.

<https://www.sigmax-med.jp/medical/cryotherapy>

ICING SYSTEM



Ice Pack



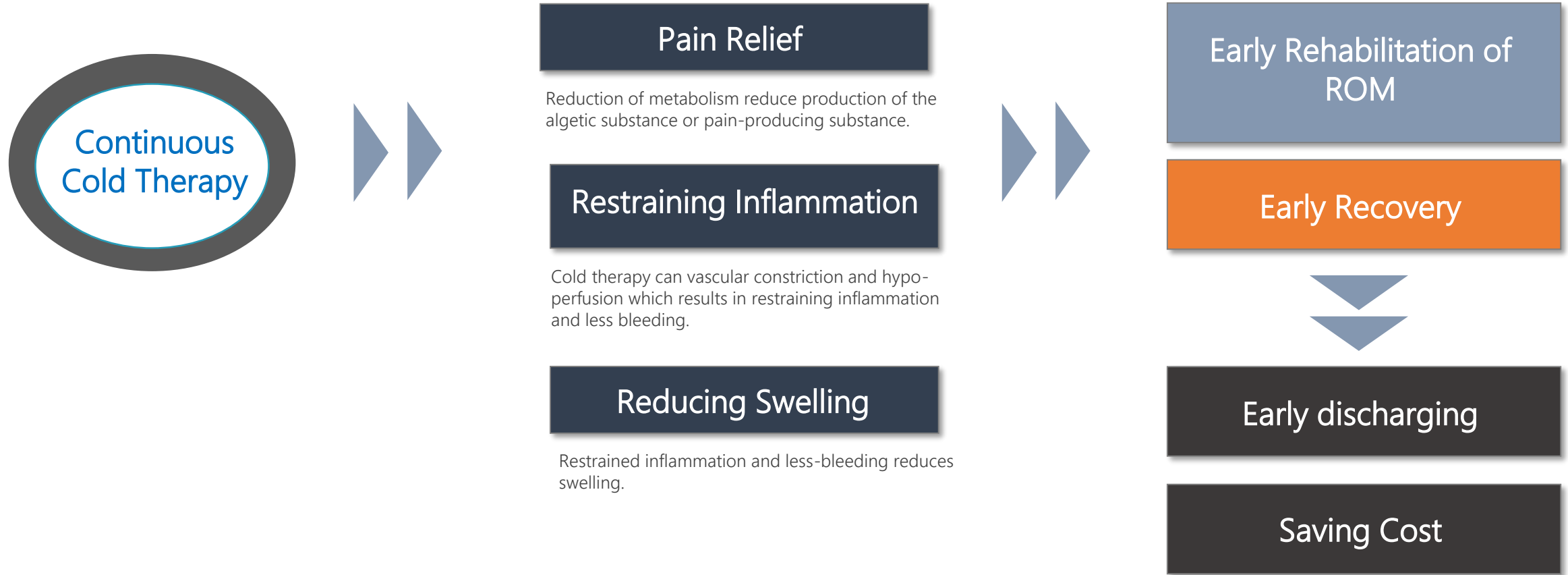
**Great Difference in
Cooling Efficiency and
Cooling Effect Duration**



Since patients use Continuous Cold therapy system continually under 5°C and preset time setting for 2 days after surgery to suppress swelling and pain caused by TKA surgery

Patients start their self-rehabilitation as like walking exercise and using Rehab (ROM) devices double faster 3days later, which it takes generally 7days after TKA surgery.

Hospitalization period was shortened from about 4 weeks to 2 weeks through this continuous cold therapy.



Reference: Knight KL. Cryotherapy in sport injury management. 1995. Human Kinetics, Champaign, IL.