



EFFICIENT
SAFE AND
EASY
DISSECTION



Clinical References



CADISS® Technology



Quotes

CADISS®

FOR MORE SELECTIVE DISSECTION

THE CADISS[®] SYSTEM

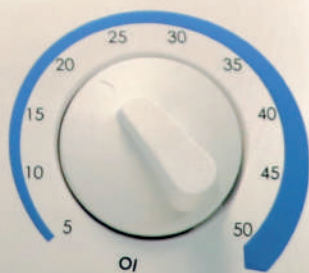


CADISS®

SELECTIVE DISSECTION

↑↑
SIDE UP

auxin
surgery
CADISS®
SELECTED DISSECTION



The CADISS® System is a novel line of medical devices for the selective dissection of pathological tissues and fibrosis. The system is able to facilitate many surgical procedures while preserving critical organs such as nerves, muscles or vessels.



THE AIM

CADISS® facilitates dissection by weakening adhesences between pathological and healthy tissues.



THE SYSTEM

CADISS® enables topical application of the pharmaceutical drug at the surgery site. Within 1 to 3 minutes the adhesion is weakened and separation is performed with the same instrument.



THE BENEFITS

- Reduce surgery side effects
- Reduce relapses
- Saving time
- Facilitating procedures



PROOF OF PRINCIPLE

- Conclusive tests in 7 indications with results published on more than 1000 patients.
- Approved in the EU for ear surgery and musculoskeletal surgery.



SAFETY

Absence of toxicity demonstrated, registered as CE Class III, tested in many investigational clinical trials (16 published studies, more than 1000 patients).





IS YOUR INDICATION SUBJECT TO COMPLICATIONS ?

CADISS® reduces the mechanical forces needed to separate tissues

IS YOUR INDICATION SUBJECT TO SIDE EFFECTS ?

CADISS® helps to preserve healthy tissues during dissection

IS YOUR INDICATION SUBJECT TO RELAPSES ?

CADISS® facilitates full withdrawal of pathological tissues

YOU HAVE TO SEPARATE TISSUES ?

CADISS® weakens the adherences at the cleavage plane to facilitate tissue separation

THE CADISS® SYSTEM

WHAT IS IT?

The CADISS® **system** is a patented medical device intended to **facilitate certain critical dissection steps** when there is a risk of damaging organs such as nerves, veins or muscles or leaving pathological material in the body.

It responds to a proven need, as evidenced by the fact that it was **originally invented by surgeons**.

CADISS® **enables a selective dissection WITHOUT cutting** by using the mesna dispensed at the very distal end of the surgical instrument. Due to its selective mechanism of action, surrounding organs are preserved.

HOW DOES IT WORK?

CADISS® is based on the combination of mechanical surgical instruments with the topical application of a pharmaceutical drug, mesna. **This drug breaks selectively disulphide bonds** in proteins, responsible in part for the adherence of two different tissues (e.g. a pathological tumour tissue to the surrounding healthy tissue).

The pharmaceutical drug is **a formulation of mesna adapted to surgery**, which is harmless to the healthy tissues themselves.

CADISS® **is complementary to** conventional and advanced mechanical techniques (e.g. which dissect tissues by tearing or cutting, indifferently all tissues).

CERTIFIED FOR



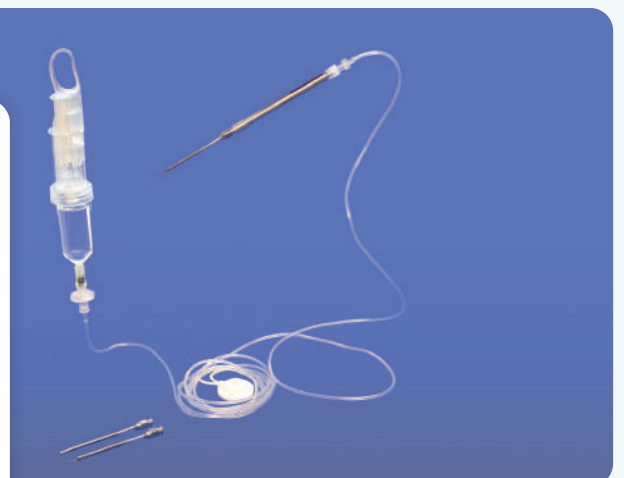
EAR SURGERY

Cleavage of severe adhesions in the surgery of chronic otitis



MUSCULOSKELETAL SURGERY

Epidural fibrosis, perineural fibrosis and tendons adhesences



THE ADDED VALUE

AN INNOVATIVE SURGERY SYSTEM

The CADISS® system is unique, complementary to conventional techniques and offer many advantages to the surgeon and to the patient especially in case of risks of damaging organs or facing relapses.

SIGNIFICANT BENEFITS



FOR SURGEONS

Easier selective dissections of pathological tissues

Dissection of fibrosis
Time savings



FOR PATIENTS

Reduced risks of surgery side effects due to damages to healthy tissues

Reduced risks of relapse from cysts or tumours



FOR HEALTHCARE

Less relapses

Less complication

Time & Cost savings

The surgeon benefits from an easier and safer surgical procedure. Moreover, by avoiding damages to healthy tissues, the patient has the advantage of a faster recovery and fewer side effects (bleedings, damages to nerves or surrounding organs). When it is critical to ensure complete withdrawal (e.g. tumours), full “en bloc” dissection is favored leading to less relapses.

DID YOU KNOW?

Pre-clinical and clinical trials have shown that topical application of mesna is well tolerated with clear positive effects.

CADISS® APPLICATIONS

DID YOU KNOW?

CADISS® is already registered as a CE Class III Medical Device for EAR surgery and Musculoskeletal surgery.

EAR SURGERY

CADISS® will weaken the adhesions to allow easy removal of the cholesteatoma and its residues, dissection of the ossicular chain, dissection of the retraction pocket while preserving critical structures.*

EAR SURGERY INDICATIONS :

- Chronic Otitis Media

MUSCULOSKELETAL SURGERY

The use of CADISS® will ease the critical tissue separation and the detachment of fibrosis adhering to the dura mater, implanted devices and peripheral nerves, tendons & muscles, and will help to preserve the targeted structures (e.g. of a risk of iatrogenic lesions) and so, will lead to better intraoperative and perioperative parameters.*

MUSCULOSKELETAL SURGERY INDICATIONS :

- Epidural fibrosis
- Nerves, tendons & muscles fibrosis
- Hand Surgery (Dupuytren disease,..)

Not certified but with published results*



NOSE SURGERY

Rhinoseptoplasty



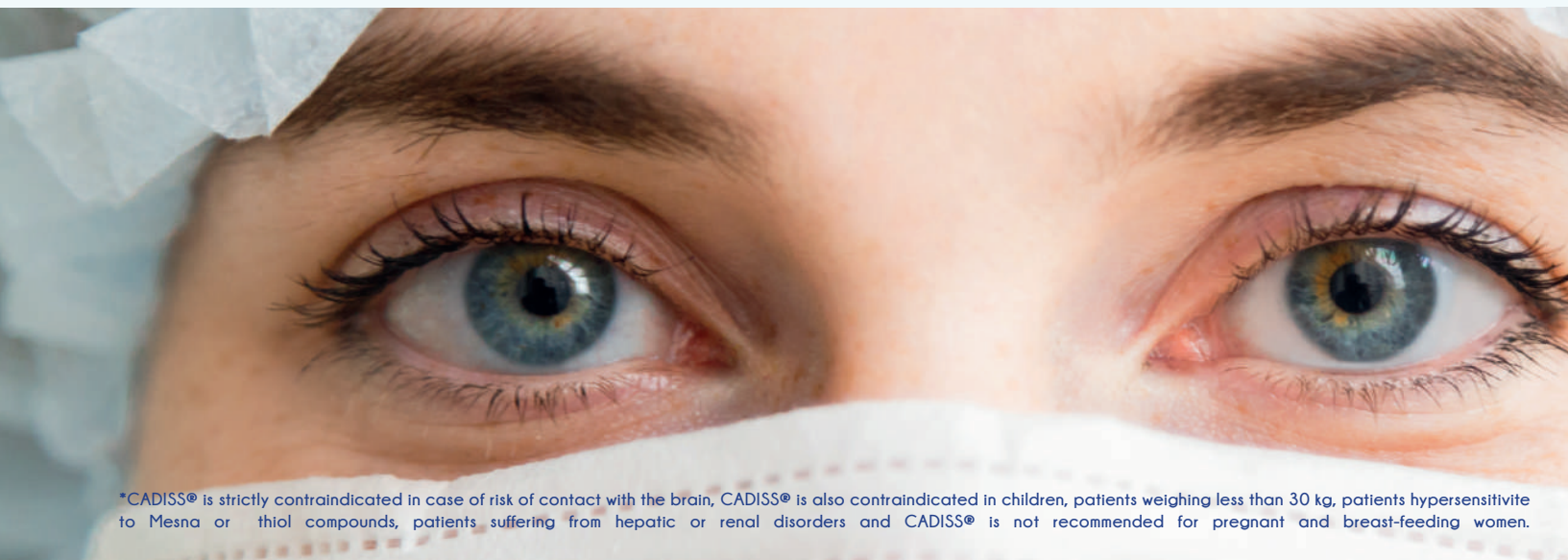
GASTRIC SURGERY

Gastric Cancer
Esophagus Cancer



GYNECOLOGICAL SURGERY

Myomectomy
Endometriotic Cyst



*CADISS® is strictly contraindicated in case of risk of contact with the brain, CADISS® is also contraindicated in children, patients weighing less than 30 kg, patients hypersensitive to Mesna or thiol compounds, patients suffering from hepatic or renal disorders and CADISS® is not recommended for pregnant and breast-feeding women.

TESTIMONIALS



DR. XAVIER COLLARD

Head of the orthopaedic surgery department, specialist in spine and hip surgery (CHU Ambroise Paré), Mons, Belgium

"Patients who undergo for spine revision surgery with epidural fibrosis in which CADISS® is used intraoperatively present better intraoperative and perioperative parameters. The surgical difficulty and the incidence of dural tears and intraoperative bleeding from epidural veins are significantly reduced."

PR. ROBERTO ALBERA

Head of ENT department, otorhinolaryngologist (Molinette Hospital), Turin, Italy

"CADISS® makes the dissection easier, faster, and more effective. The cholesteatoma seemed to immediately losing grip from the tissues and OCR after a minute, or less, from the immersion."



PR. PHILIPPE LEFEBVRE

Head of ENT department, otorhinolaryngologist (CHU Liège), Liège, Belgium

"The CADISS® system is easy to use and facilitates the surgery of chronic otitis media. There is less risk to damage organs and the cholesteatoma can be removed en bloc limiting the risk of relapses. The duration of surgeries is significantly reduced."

DR. MARTA SANDOVAL

ENT department, orhinolaryngologist (Hospital Clinic i Provincial de Barcelona) Barcelona, Spain

"CADISS® has become an important instrument for my daily surgery to deal with tympanic membrane retractions, primary and recurrence of middle ear cholesteatomas. It is an easy instrument to use and helps remove the whole disease from the middle ear. Looking forward to get more experience with it!"



Pr. Manuele Casale : University Polyclinic Bio-Medical Campus, Head of Integrated Therapies in Otolaryngology otorhinolaryngologist, Rome, Italy

Pr. Marta Sandoval : Hospital Clinic i Provincial de Barcelona, ENT department, otorhinolaryngologist, Barcelona, Spain

Pr. Martin Chovanec : Charles University, department of otorhinolaryngology, head and neck surgery, Prague, Czech Republic

Pr. Philippe Lefebvre : CHU Liège, ENT department, otorhinolaryngologist, Liège, Belgium

Dr. Xavier Collard : CHU Ambroise Paré, head of orthopaedic department, specialist in spine & hip surgery, Mons, Belgium

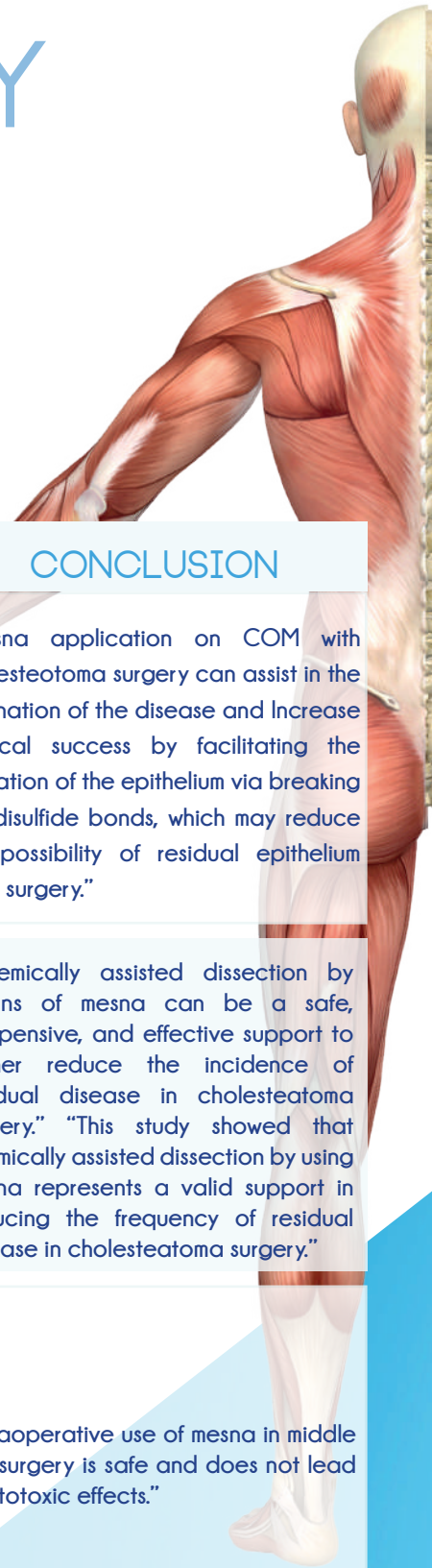
Pr. Frédéric Schuind : Université Libre de Bruxelles and Erasme University Hospital, orthopaedic and traumatology department, orthopaedist, Brussels, Belgium

Pr. Rudy Leon De Wilde : University Hospital for Gynecology, gynecological surgery, obstetrics and gynecological oncologist, Oldenburg, Germany

Pr. Roberto Albera : Molinette Hospital, ENT department, otorhinolaryngologist, Turin, Italy

Pr. Kazuki Sumiyama : Jikei University School of Medecin, abdominal surgery, Tokyo, Japan

EAR SURGERY BENEFITS



PUBLICATION	MESNA/PLACEBO	RESULTS	CONCLUSION
Kolcioglu MT Et al. Effectiveness of mesna on the success of cholesteatoma surgery. Am Otolaryngol. 2014;35 (3): 357-6.	46 / 9	Relapses from 18% to 7%	"Mesna application on COM with cholesteatoma surgery can assist in the elimination of the disease and Increase surgical success by facilitating the elevation of the epithelium via breaking the disulfide bonds, which may reduce the possibility of residual epithelium after surgery."
Vincenti V Et al. Chemically assisted dissection by means of mesna in cholesteatoma surgery. Otol. Neurotol 2014;35(10):1819-24.	108 / 106	Relapses from 25% to 11%	"Chemically assisted dissection by means of mesna can be a safe, inexpensive, and effective support to further reduce the incidence of residual disease in cholesteatoma surgery." "This study showed that chemically assisted dissection by using mesna represents a valid support in reducing the frequency of residual disease in cholesteatoma surgery."
Vincenti V Et al. Cochlear effects of intraoperative use of mesna in cholesteatoma surgery. Acta Biomed 2014;85(1):30-4.	55 / 51	Safety : No concern	"Intraoperative use of mesna in middle ear surgery is safe and does not lead to ototoxic effects."



MUSCULOSKELETAL SURGERY BENEFITS

PUBLICATION	MESNA/PLACEBO	RESULTS	CONCLUSION
Denaro V et al. Mesna for chemically assisted tissue dissection 2008;17:1752-1756.	 15 / 15	Side effects (Dural Tears) from 27% to 7%	"In our hands, mesna contributed significantly to reduce effects of the operative complications, with a diminution of the surgical time and the grade of difficulty for the surgeon, confirming its ability as chemical dissector also for epidural fibrosis in revision lumbar spine surgery."
Casale M. Mesna for chemically assisted tissue dissection Expert Opin Investig Drugs. 2010;19(6): 699-707.	NA / NA	Expert opinion	"In revision lumbar spine surgery, its use resulted in significantly easier surgery and reduction of postoperative complications. Given the high efficacy and favorable complications rate, future applications in the surgical field are expected to increase."

CADISS® MANUAL KIT

Dispensing is thumb controlled by the manual dispenser holding the instruments.



THE CARTRIDGE

Used with the manual kit
and the remote kit



MANUAL KIT CONTENT

Disposable components

Contains the mesna product – Cartridge

Connects the cartridge to the instruments – Tubing

Controls manually the amount of mesna product dispensed through the instrument – Manual Dispenser

COMPATIBLE WITH

Instruments



Delivers precisely the mesna product
through the channel at the surgery site.

CADISS® REMOTE KIT

Dispensing is controlled by a foot pedal.

FUNCTION

Contains the mesna powder and a buffer solution for reconstitution before surgery.

Generates the 5% mesna product suitable for surgery after reconstitution.

REMOTE KIT CONTENT

Disposable components

Cartridge – Contains the mesna product

Tubing – Connects the cartridge to the instruments and the pump



COMPATIBLE WITH

Pump



Controls the amount of mesna product dispensed through the instrument.

Handle



Connects the tubing and the instruments.

Instruments



Delivers precisely the mesna product through the channel at the surgery site.

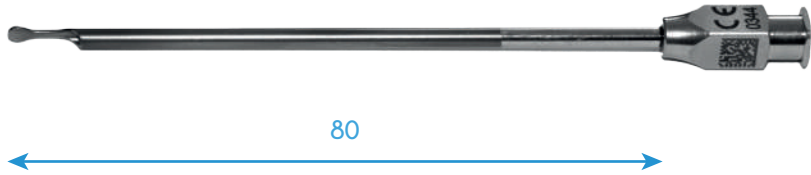
CADISS® INSTRUMENTS

CODE STANDARD

INSTRUMENT (mm)

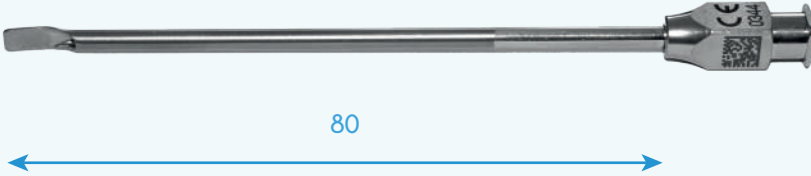
AU-4-502

DISK CANNULA



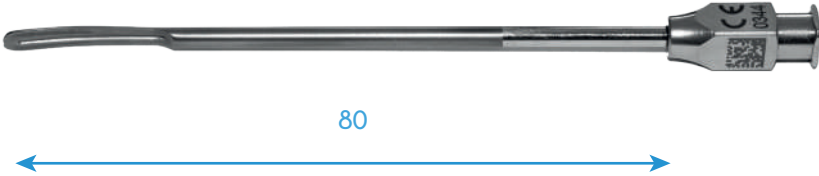
AU-4-503

CURVED PLATE



AU-4-504

JOSEPH PERIOSTEAL



AU-4-505

HOE-STYLE ELEVATOR

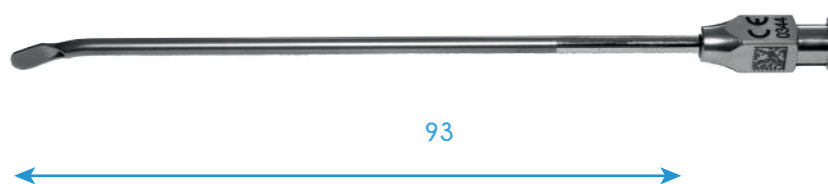


CODE STANDARD

INSTRUMENT(mm)

AU-4-510

SPATULA



AU-4-514

DISK CANNULA - d 1.5



AU-4-013

HANDLE



CADISS® SELECTIVE DISSECTION SYSTEM

YOUR TAKE AWAY MESSAGES

①

CADISS® SYSTEM FACILITATES
YOUR SELECTIVE MECHANICAL
DISSECTION WITHOUT CUTTING OR
TEARING TISSUES.

②

CADISS® SYSTEM IS SAFE AND
PRESERVES HEALTHY TISSUES SUCH
AS NERVES AND BLOOD VESSELS.



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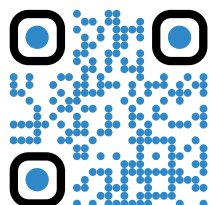
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TEST CADISS® !