



*imaging all the women*



# ReseCare

Clinical applications



  
**delmont**  
imaging

ReseCare is a 18.5Fr. only mini-resectoscope using bipolar energy. Its small diameter makes it perfectly suitable for nulliparous patients, infertile, menopausal women or women with a stenotic cervix. In a dedicated office, on a locally anaesthetized patient, or in the operating theatre, it perfectly meets the needs and makes it possible to treat all the pathologies using either section techniques (synechia, septum, malformation) or resection techniques (polyp, fibroma, trophoblast retention) and to ease new treatments such as isthmosceles cure.

The electrode being smaller (4mm), it creates small dimension chips which do not interfere with your surgical procedure. The operating time can be elongated before having to proceed to the chips removal. The small electrodes are also convenient for surgical procedure at cornual level. ReseCare is so easy to handle that it increases your skills and the quality of your results.



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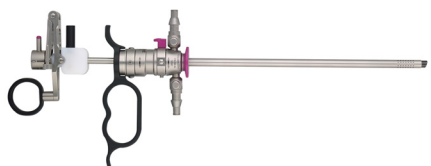


## Set composition

- 1 A **HD Hysteroscope, 2.9mm, 12°** to provide sharp images of the entire uterine cavity while keeping the electrode positioned in the middle of the field of view.



- 2 A resectoscope including the following items:
  - A **passive working element** in ultra-light PEEK for a better working comfort.
  - An **inner rotatable sheath** for easy movements during the surgical procedure without being disturbed by the irrigation / suction tubes.
  - A **6mm outer operating sheath** with efficient double flow management. Enjoy the benefits of the Quick-lock system eased by arrow marking.



- 3 **Four different electrodes** to treat all pathologies, even those at the bottom of the cavity.



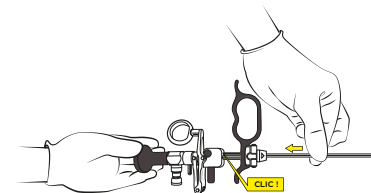
- 4 A **light cable** and its adapters.



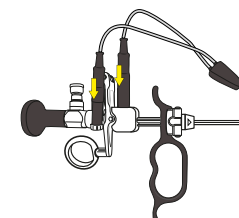
## Correct handling

Some recommendations and tips to ensure you a better working comfort:

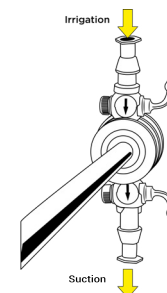
- 1 Make sure that the electrode is connected into the handle before use.



- 2 Connect both ends of the bipolar cable securely.



- 3 Make sure that the irrigation and suction tubes are well connected.



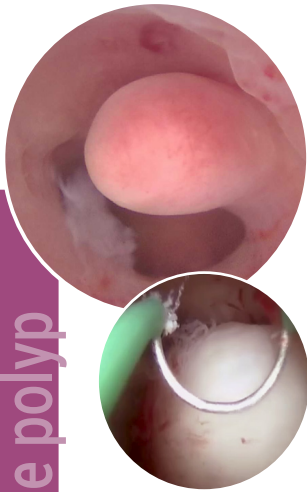
- 4 Do not activate the electrode when not in contact with any tissue.

- 5 When the electrode is activated, maximize the contact area of the electrode with tissue to avoid bubbles. If bubbles appear, bring the distal part of the resectoscope closer to aspirate them.

- 6 Do not use too high or too low generator powers. If the power is too low, the chips will stick to the electrode while too high power will quickly damage the electrode.

## Anesthesia

Short procedures (<15mm) can be performed with a paracervical block, spinal or general anesthetics (GA). Beyond this operating time, GA or local anesthetics should be preferred in cooperation with the anesthesia team.



## The polyp

### Definition

Uterine polyps are protrusions of the endometrium or endocervix. Their size varies from a few millimeters to several centimeters. They are often asymptomatic but may be the cause of abnormal bleedings or infertility.

### Treatment

In case of infertility or of age > 40 years, they must be removed. In the other cases, and especially for polyps < 15mm, they can resolve and need to be re-controlled before any operatory indication.

## Surgical technique

ReseCare can be used for all polyps, regardless of their type, size or location.

### Electrodes to use

*for all lateral polyps*



or

*for the polyps of the bottom cavity*

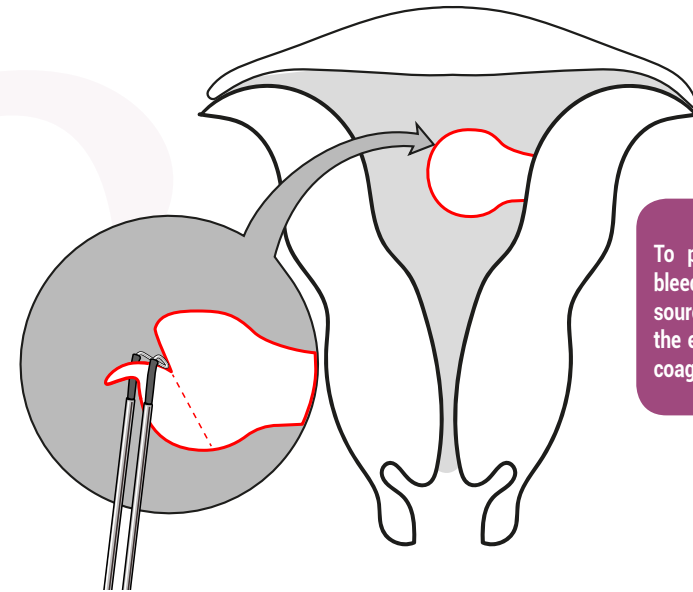



### Surgical method

Place the electrode at the level of the polyp to resect it. The number of chips to produce can vary according to the size of the polyp. Resection of the polyp is complete when the underlying myometrium is reached.

Depending on the size of the polyp, it will be necessary to extract the chips before the end of the surgical procedure.

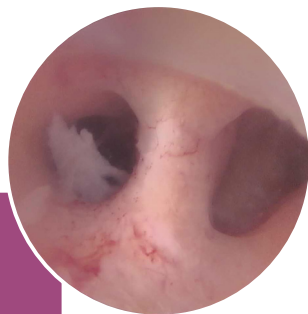
The uterine mucosa around the polyp may or should be resected in the absence of a subsequent desire for child bearing, or destroyed by a roller ball electrode.



 To perform hemostasis when bleeding occurs: locate the source of the bleeding, place the electrode on it and activate coagulation.

### In a dedicated office

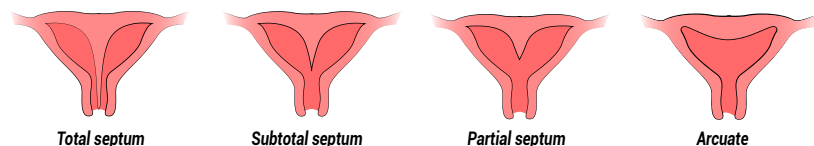
On a locally anaesthetized patient, all polyps under 20mm can be removed with ReseCare.



## The uterine septum

### Definition

The uterine septum is a congenital anomaly of the female genital tract where the uterine cavity is divided by a longitudinal wall composed of fibrous and/or muscular tissues. According to the importance of the septum, we are talking about:



Amongst the population of septate uterus patients, 40% of early miscarriages might be caused by septum.

Septate are also responsible for fetal malpositions leading to caesarean sections, and premature deliveries in case of association with a cervical incompetence diagnosed by cervical ultrasound, between 16 and 20 weeks of amenorrhea.

The link between infertility and uterine septum is not proven.

### Treatment

To diagnose uterine septum, carry out a 3D ultrasound with coronal view to differentiate with a uterus called bicornuate (AFS) or bicorporeal (ES-HRE/ESGE) and visualize the fundic serosa (serous membrane). A section of the septum must be easily performed by operative hysteroscopy.

## Surgical technique

According to the operator's experience, the section is carried out either with a cold instrument like Easycare limiting the rate of synechia or with a 6mm resectoscope like Resecare.

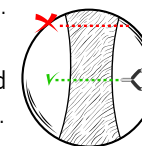
### Electrode to use



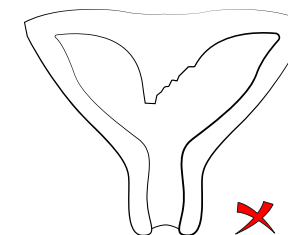
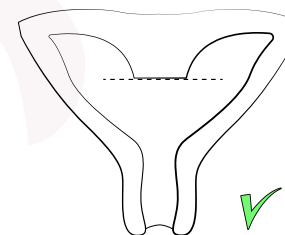
to maximize the contact zone between the electrode and the septum

### Surgical method

- 1 Position yourself at the low base of the septum.
- 2 Position the knife perpendicular to the wall and activate the current to cut the septum in the middle.
- 3 When the current is activated, simply push / move forward the knife to cut the septum.
- 4 The deeper you cut, the wider the septum will be. It is thus necessary to shift regularly from one uterine compartment to the other to have always the bottom of the uterine cavity aligned.



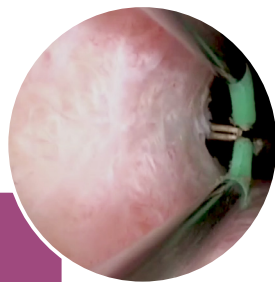
• To perform hemostasis when bleeding occurs: locate the source of the bleeding, place the electrode on it and activate coagulation.  
• It is essential to use the ultrasound assistance in the case of a total partition.



- 5 The purpose is to have the two tubal ostia aligned at the end of the procedure. If bleeding appears, it is advised to stop the surgery. This might be due to the junction between fibrous and muscular nature of the septum. The latter does not always need to be cut.
- 6 Two months after the surgery, an echosonography check is necessary to eliminate a synechia and measure the size of any residue of septum (usually <10mm).

### In a dedicated office

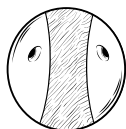
On a locally anaesthetized patient, it is possible to perform the treatment of arcuate septums. The operating method is identical. On average, only three minutes are required to remove 10mm of septum.



## The synechia

### Definition

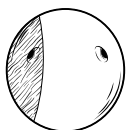
A synechia is an adhesive process that affects the uterine corpus. It can be more or less wide. The pragmatic approach to classification presented below allows them to be categorized:



#### Grade I

Thin adhesions with both ostia visible.

*Easily ruptured by hysteroscope sheath alone. Cornual areas normal.*



#### Grade IIa

Singular dense adhesion blocking the tubal orifice.

*Connecting separate areas of the uterine cavity. Cannot be ruptured by hysteroscope sheath alone.*



#### Grade IIb

Multiple dense adhesions.

*Connecting separate areas of the uterine cavity. Unilateral obliteration of ostial areas of the tube*



#### Grade III

Dense and extensive adhesions with partial obliteration of the uterine cavity.

*Bilateral (partial) obliteration of the tubal ostial area.*



#### Grade IV

Extensive endometrial scarring and fibrosis.

*With amenorrhea.*

### Treatment

Prevention, based on limitation or elimination of curettage is the best way to avoid synechia (prefer hysteroscopy for the treatment of trophoblastic retentions). If they interfere in the reproductive process or are symptomatic (hypomenorrhea, amenorrhea, cyclic pain), synechia should be treated.

### Surgical technique

The use of cold instruments to treat synechia is favored for a better restitution of the cavity, but ReseCare can be used depending on the user experience.

### Electrode to use




*to easily minimize the energy surface in contact with the remaining endometrial islets*

### Surgical method

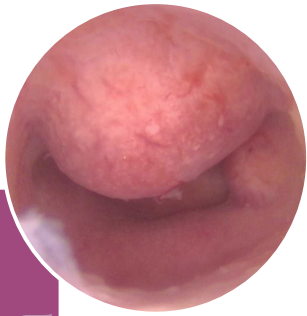
In the case of Type I and IIa synechia, their removal only requires some pressure actions without electrical energy. In the case of thick synechia type IIb, III, IV, the first step is to find a safe path within the cavity by cutting step by step until possible visualization of both ostia.

Activate the electrode to cut the synechia and restore a normal cavity. When treating an area of synechia located against the endometrium, place the knife perpendicular to the wall to minimize the area of contact between the energy passing through the knife and the remaining endometrial islets. This will ensure a good restitution of the cavity.

 It is essential to use the ultrasonic assistance in the case of IV, Va and Vb synechia.

### In a dedicated office

On a locally anesthetized patient, it is possible to treat type I and IIa synechia.

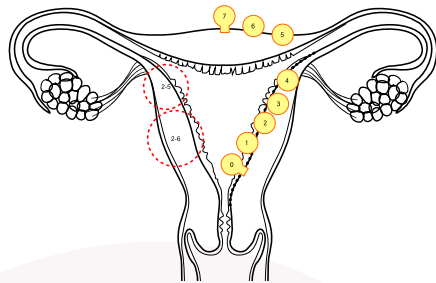


## The myoma

### Definition

Uterine fibroids are benign muscle tumors of the uterus. Their size can vary from a few millimeters to several centimeters. According to their position, myoma are classified by type ranking from 0 to 7.

Myoma can cause abnormal bleedings, pains but also interfere with fertility for those located in the uterine cavity.



### Treatment

Only symptomatic submucous myomas are treated by hysteroscopy (type 0 to 2), if they do not exceed 50mm, with a posterior safety wall greater than 5mm or under ultrasonic control if  $\leq 5$ mm.

## Surgical technique

ReseCare can be used for all myomas treatable by hysteroscopy, regardless of their type, size or location.

### Electrodes to use

for all lateral myomas



or

for myomas at the bottom of the cavity



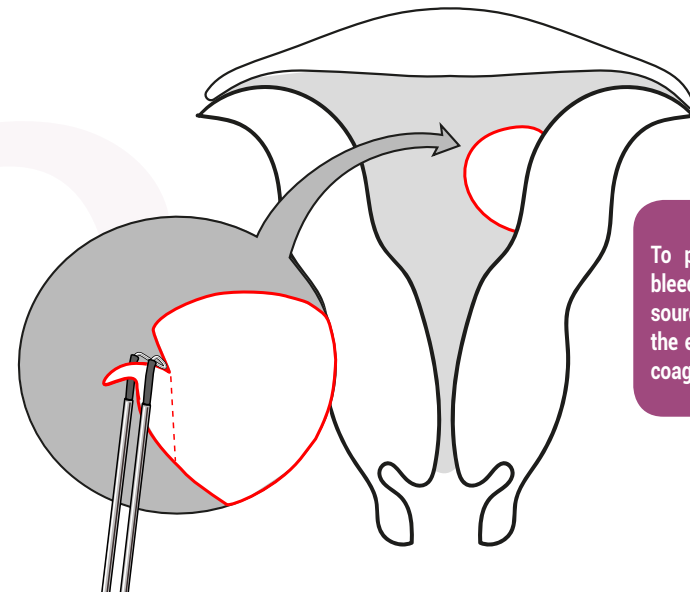
or

to spray some myomas from the horn or bottom of the myoma when it is considered too close to the serosa



### Surgical method

The surgical method is the same as for polypectomy. However in some cases, depending on the number of fibroids to be resected, their sizes, their types, their positions, etc, two operating procedures may be necessary.

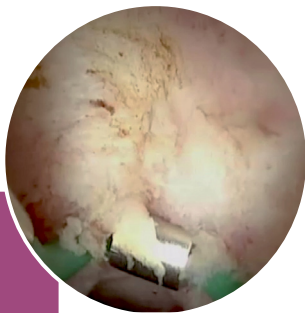


To perform hemostasis when bleeding occurs: locate the source of the bleeding, place the electrode on it and activate coagulation.

### In a dedicated office

On a locally anesthetized patient, it is possible to treat less than 20mm type 0 myomas.

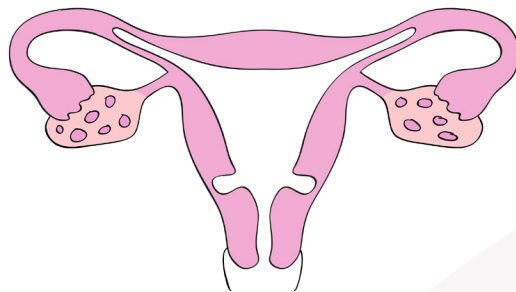




## The isthmocele

### Definition

The isthmocele is a dehiscence at the level of the uterine scar of caesarean section. An accumulation of blood in this pouch during menstruation can then cause abnormal bleeding, pain and infertility. Pregnancy complications that result from an isthmocele include ectopic pregnancy, low implantation, and uterine rupture.



### Treatment

Surgical treatment of an isthmocele should be offered to symptomatic women or to the asymptomatic patient who desires future pregnancy. Treatment by laparoscopic or vaginal route may be considered when the security wall is less than 1,5mm or in case of failure of a first hysteroscopy.

## Surgical technique

ReseCare is perfectly suited for the treatment of the isthmocele.

### Electrode to use

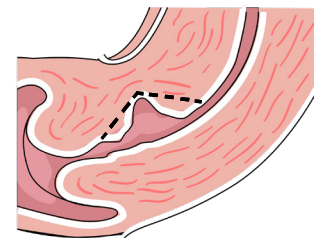


then



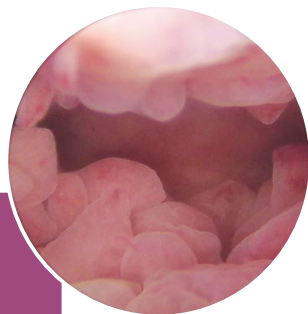
### Surgical method

**1** The purpose of the surgical procedure is first to resect the upper and lower edges of the isthmocele using the 30° loop in order to flatten the slope of the pouch.



**2** Then always with the 30° loop, any scar tissue must be removed from the isthmocele until the underlying myometrium appears.

**3** And finally, spray the entire isthmocele with the roller electrode to prevent blood production.



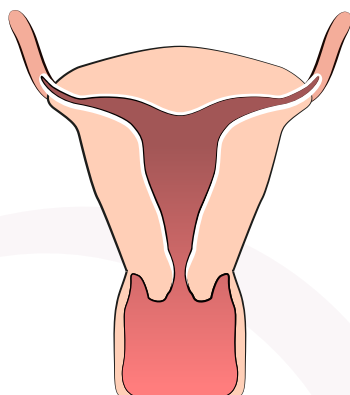
## The hypertrophy of the uterine mucosa

### Definition

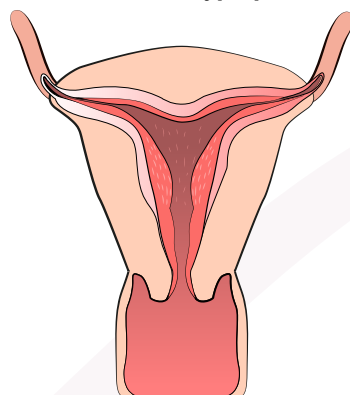
This is an abnormal thickening of the uterine lining that can cause metrorrhagia, menorrhagia, pain and even infertility. It is often caused by a hormonal disorder.

This thickening can take two aspects: polypoid or simple.

Normal endometrium



Endometrial hyperplasia



### Treatment

When there is a desire for pregnancy, hormonal treatments must be offered. For women close to menopause without pregnancy desire or menopausal, surgical treatment is ideally indicated. This is the thinning of the lining of the uterus by resection: called endometrectomy or endometrial resection. The procedure must be performed on the entire cavity.

## Surgical technique

Equipped with smaller loops, ReseCare allows an easy access to all the areas of the uterus to perform an endometrectomy, even those difficult to reach such as the level of the ostia.

### Electrodes to use



### Surgical method

**1** It is strongly recommended to begin resection with the roller electrode at the level of the ostia and uterine fundus for several reasons:

- These areas are difficult to access, this is why they should be treated from the outset when no chips are in the way
- The uterine wall is thinner in this area and the use of the roller is safer.

Spray the area with the roller. No chips are formed. You can also choose to use the right loop for the uterine fundus between the ostia. In this case, spray the ostia with a roller first.

**2** Then change the electrode for the 30° loop which allows to resect the rest of the uterine cavity. Resect until you reach the myometrium. One or more chip extraction phases will be required.

The 30° electrode resection is used to obtain chips and send them to the anatomopathology department. Perform the entire procedure with the roller electrode is possible if a prior biopsy has been performed.



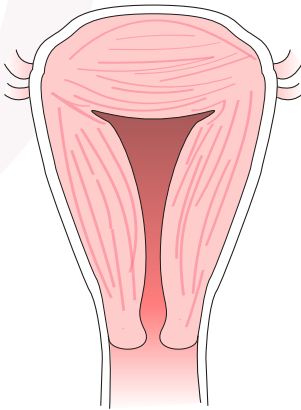


# The adenomyosis

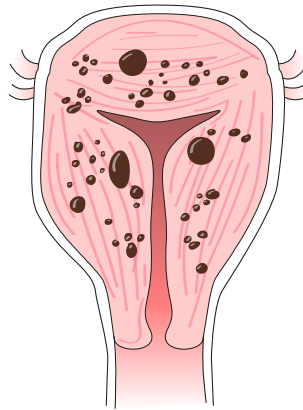
## Definition

It is a gynecologic medical condition characterized by the abnormal presence of endometrial tissue within the myometrium which can lead to menorrhagia, metrorrhagia and dysmenorrhea. Adenomyosis can also affect fertility.

**Normal uterus**



**Adenomyosis**



## Treatment

Only symptomatic women should be treated.

Superficial adenomyosis only can be treated by hysteroscopy and for patients who no longer wish to become pregnant. The surgical procedure is also an endometrectomy: it will be localized if the adenomyosis is concentrated on a few foci or total if the adenomyosis is diffuse. In case of superficial adenomyotic cyst, they can be resected while maintaining a functional endometrium.

Booklet written in collaboration with Prof. Fernandez, Prof. Cicinelli, Prof. Grimbizis and Dr. Palma.