

Device for the extraction of surgical specimens by insufflation and suction

Insufflation and suction-aided system for the extraction of surgical specimens that allows a quick, easy and safe specimen withdrawal procedure from inside a patient's body during a surgical intervention.

Description and essential characteristics

Optimized insufflation and suction-aided surgical specimen extraction device intended for the isolation, containment and extraction of body tissue from inside the patient, which reduces the volume of the surgical specimens, increasing their consistency and moulding them into an elongated shape by means of a mechanism of insufflation and subsequent extraction of fluid.

For this purpose, the surgical device uses a tubular element, a bag support, a double-layered bag and a traction rope. The device also provides, on one hand, a means of insufflation and suction, which enables compaction and moulding of the specimen into an elongated shape; and on the other hand, a means of adjustment that allows the abdominal wall to gradually dilate to the maximum diameter of the elongated specimen (at the moment of specimen extraction), diminishing the need to extend surgical incisions and reducing recovery time. Finally, an actuating element moves the various parts of the device.

The device operates as follows:

1. The starting point is a situation in which the device has all its elements folded and retracted into the duct.
2. The various elements of the surgical device are unfolded when advancing the actuating element.
3. The surgical specimen is inserted into the bag.
4. The bag is closed by pulling the traction rope until the double-layered bag is completely separated from the bag support.
5. The specimen is compacted and moulded by means of insufflation and suction.
6. The device is refolded by the retraction of the actuating element; and the double-layered bag is coupled to the adjustment means of the abdominal wall by stretching the traction rope.
7. The surgical device is extracted from the patient's body through the orifice previously made.

Competitive advantages

The primary advantages this device provides are the following:

1. It applies a vacuum for the gases and liquids that the specimen may contain, reducing its volume, while also insufflating fluid (gas or liquid, such as physiological saline solution) into the interlayer of the double-layered bag to compact and mould the specimen into an elongated shape, avoiding its natural tendency to form a sphere (making it difficult to extract, as it would require extending the incisions).

2. It takes advantage of the elastic properties of the abdominal wall to facilitate the extraction, thus avoiding the need to extend the incisions, and improving post-operative conditions.

Type of collaboration sought

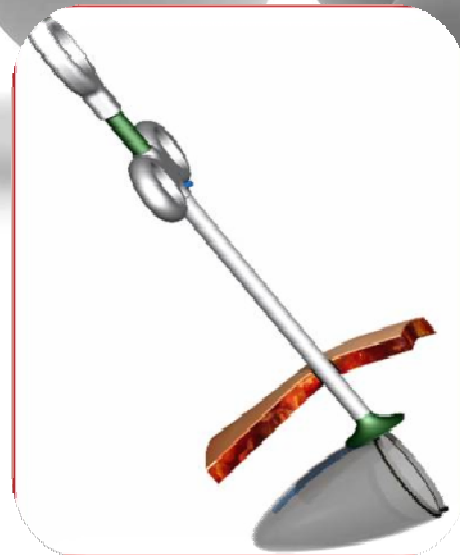
Cooperation is sought with any Party interested in partnering, licensing or investing in the technology, whether it be an investor to fund the project, a partner interested in getting involved in any of the various phases until its placement on the market, a patent licensee, etc. Organisations potentially interested in this technology are those devoted to the manufacture, commercialisation and/or distribution of healthcare products, particularly medical devices; as well as hospitals, healthcare centres, universities, research centres and all types of institutions engaged in the training of healthcare professionals.

Current stage of development

R&D Phase

Current state of intellectual property

Spanish patent P201031490, granted in March 2013.
International patent application PCT/ES2011/002357.



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