

REVIEW

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GUARDENIA: A “REALLY GREAT SOLUTION” FOR CONTAINED TISSUE EXTRACTION

The Guardenia Contained Extraction System, developed by Advanced Surgical Concepts (Wicklow, Ireland), offers a comprehensive approach to contained tissue extraction.

Background. Contained tissue extraction has been an integral part of laparoscopic procedures from at least the late 1980s and early 1990s. Bags of one sort or another are routinely used to remove from the abdomen all sorts of human tissues, including but not limited to ovaries, ectopic pregnancies, gallbladders, kidneys, spleens, and the list goes on. However, after the April 17, 2014, FDA Safety Communication discouraging the use of power morcellators with myomectomy or hysterectomy, the need for more robust contained tissue extraction systems has been ongoing, and there has yet to be a really good solution despite some innovative attempts.

Design/Functionality. Advanced Surgical Concepts’ Guardenia System is the latest attempt to provide a “really great solution” for surgeons to address my 3 “musts” for any system to gain traction in this niche.

1. Must #1. An easy method for getting the device into the abdomen.
2. Must #2. An easy method for getting the tissue into the bag.
3. Must #3. An easy method for getting the tissue out of the body while still containing the cells within the system.

In my opinion based on my usage, Guardenia does a pretty good job addressing all my “musts.”

The Guardenia System is a sterile, single-use device with 3 main components—an introducer with a plunger that will fit through any standard 12-mm trocar, a polyurethane film bag supported by a nitinol ring, and an opening ring with expandable semi-rigid polyethylene “Guard Petals.” When I used it in the operating room to manually morcellate a 10-cm myoma through the umbilicus, I thought it was pretty spot on. Getting the bag into the abdomen is 100% intuitive but even has a nifty up-arrow built onto the tip to make sure the bag is opened in the proper direction. The bag material



and the nitinol ring, in combination with the 17.5-cm opening ring, make the process of getting the specimen into the bag and exteriorized easier than any other system I have ever used. And, the opening ring with the Guard Petals yields a very large retraction area for the incision size while providing excellent protection to the surrounding tissues. Overall, Guardenia worked better than anything else I have previously used.

Innovation. Guardenia does not really introduce any fundamentally novel ideas, but it does combine a lot of standard technologies into a product whose sum is much larger than its parts. I would like to see it combined with an occlusive top piece to allow the retractor to be used for single-port laparoscopy as well, but that would just be the cherry on top.

Summary. I have been working on inventing a really good contained tissue extraction system for a long time, and I am a bit chagrined to see someone else outsmart me (low bar), but Advanced Surgical Concepts did, and I really like Guardenia. For pathology that is appropriate for contained morcellation, this device is definitely worth a try, and I suspect many surgeons will switch to it from whatever they are currently using.

FOR MORE INFORMATION, VISIT
<https://advancedsurgical.ie/guardenia-contained-extraction-system/>

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