

SURGEON PROFILE: Dr. Justin Chura

Experiences with the Carter-Thomason CloseSure System[®]

OperSurgical

In this article we will share the experience of Dr. Justin Chura with his challenges and technique for laparoscopic port site closure along with his use of the Carter-Thomason CloseSure System[®].



Dr. Chura is a graduate of the University Of Pennsylvania School Of Medicine, and completed his Obstetrics and Gynecology residency a Magee Womens Hospital in Pittsburgh and a fellowship in Gynecologic Oncology at the University of Minnesota. He is a can-

didate member of the Society of Gynecologic Oncologists. He is currently the Associate Division Director of Gynecologic Oncology at Crozer-Chester Medical Center in Upland, PA.

Dr. Chura, how long have you been in practicing gynecology at Crozer Chester Medical Center?

Since 2007, so it's been three years I've been in practice after my fellowship.

What are the top procedures that you perform most regularly?

The top procedure is definitely endometrial staging cancer, whether open or laparoscopic, and I probably do more of those laparoscopically. Number two would probably be hysterectomies for benign disease, but on complicated patients that someone else may not want to deal with. Third, would be ovarian cancer procedures.

On average, how many laparoscopic procedures would you perform a month?

I would say I do around ten laparoscopic hysterectomies per month or so, in a good month. The low number would be five laparoscopic procedures, the higher being ten, and about 80 percent of those are robotic.

What would you say is the demographic of your patient population, both now and in the future?

Definitely older patients. I have a lot of octogenarians in my practice, and part of that motivates me to do laparoscopic surgery because with older patients, the less you disrupt their physiology, the better they recover. I also have a high number of obese patients as

well. Last Thursday, I had a patient who did not have cancer. She had hyperplasia, but she was over three hundred pounds and was sent to me for that reason. She also had a prior, ruptured appendix among other challenges. So as you know, the more obese



a patient is, the more medical complications they have such as diabetes and high blood pressure.



What would you say are the key operative challenges of your average patient, and which of these challenges do you encounter intraoperatively due to your line of work?

The first concern is getting your port in safely without causing injury. Once the port's in, the rest of it-as is standard with many of my complex procedures—I do robotically. That way, it's actually easier for me than routine laparoscopies. It's more ergonomic in that I don't have to struggle with the patient's obesity once I'm set. Then, however, it's doing the dissecting and that type of thing. So, once the ports are in you're fine. As for the technical challenges on the hysterectomy, you've got to make sure you're following your anatomic principles; so that you're staying medial to the ureter when you're doing a simple hysterectomy. Also, that you've dissected the bladder and rectum away, those types of things. The same basic principles you use for open surgery apply for laparoscopy, such as knowing your anatomy and what principles to follow.

What are your thoughts regarding the manipulation of port sites both in traditional laparoscopic procedures as compared to robotic procedures?

I think that there may be less manipulation robotically in the sense that the trocars aren't moving in and out. I think we've all had cases where you put a five in and, by the end, you're using a ten because the trocar has slipped out several times and extended the incision. With a robotic trocar, there's less risk of that trocar moving in and out. There is probably very significant manipulation all around that port, back and forth, left and right, etc. However, because the surgeon's at the console, you're now watching that manipulation. Do I see that the port is more stretched out at the end? Not necessarily, at least not that I've noticed. The robots are set up as 8 mm ports, which I don't close, and knock on wood, I haven't had hernias in 8 mm ports up to this point. That may change some day, maybe.

What specific challenges have you encountered in closing the port sites in your patients?

You know, with a thin patient it is relatively easy. It is with the obese patients that it's difficult to make sure that you're working with the fascia, that you're getting a good bite of the fascia, and getting all layers – fascia, muscle, peritoneum. The issues you can run into are closing the fascia but still having a defect in the peritoneum that causes a Richter's hernia. So, it really is a challenge for the obese patients more than the slimmer patients.

A few years ago, you authored a white paper that spoke about the challenge of port site closure, the importance of closing, and the complications that can arise if the port is not closed properly. You specifically focused on the costs to the hospital system along with the impact on patient outcomes. What compelled you to write a paper like that?

Even at the point in time before healthcare reform passed, there was already increasing scrutiny from CMS upon preventable complications and they're focusing on bloodstream catheter infections, urinary tract infections from Foley catheters, central venous catheters, basically, hospital acquired infections. They're looking at readmission rates and they may not reimburse you if you're readmitted within a certain period of time. Port site hernias are a much smaller number of events compared to bloodstream infections from catheters, but it's a very significant complication when it occurs, and one that is a very preventable complication. At the time of the case, I did not have a good closure device available to me. We were using Allis clamps on the fascia. The fascia was closed, but the peritoneum wasn't and the result was a Richter's hernia, which you could see in the pictures. If I had had the device that I now use to close every layer, maybe this wouldn't have happened. So, that was what inspired me: it was to look at the cost of this event; how preventable it was if we had an appropriate piece of equipment to help achieve a better closure.

When were you first introduced to the Carter-Thomason CloseSure System[®] and what method did you use prior to that?

I was introduced to the system during my residency. Before, some people would use an Endo Close[™] device where you shimmy the device along the port, or they would close primarily with Allis clamps on fascia. Those were the two most common. I've never used any other closure devices aside from the Endo Close[™].

What were the challenges you had with those devices?

Well, with the Endo Close[™], you sort of shimmy the device along the port, but you can't quite know or be sure of what you're hitting. You'll definitely hit the peritoneum with the Endo Close, but you may not get the layers you need. I also found it to be an awkward instrument to manipulate.

What would you say are the key benefits of the Carter- Thomason System?

It was easy to learn. I learned how to use it as a second year resident. It's also relatively inexpensive. Additionally, you can see you're getting a good closure. You can see your peritoneum being closed. You can palpate your fascia being closed. You know you're getting a reasonable bite of tissue with it.

How valuable do you find the Pilot[®] guide, which we promote as being the key part of the system, in comparison to suture-passer only devices?

The Pilot guide forces you to get a better bite, which brings the tissue together in a more secure way.

We recently introduced the 15 mm Pilot guide to the product line. From your experience, what is the value and need for that type of a guide in closing port sites?

I had a case this morning that was 14 cm cyst. There were no features to suggest it was malignant. The patient was medically compromised. This was someone I did not want to make a large midline incision on unless absolutely necessary. So, I knew I was going to go in with a laparoscope and drain the cyst, which is a little bit of a calculated risk as an oncologist. That being said, to get that out, I don't morcellate those specimens. So I put in a larger Endo Catch™ bag and deliver it through a 15mm port. The benefit of having the bigger 15 mm closure device is that you have your device in and can get two, interrupted stitches in one swoop, so to speak.

What size port sites do you typically close and why?

We close anything that is a centimeter or greater because that's sort of where your risk for herniation becomes significant. I will close a 5 if it has been in and out multiple times, the port has slipped, and it seems looser from excessive manipulation. I don't usually



close 5 mm or 8 mm ports on a regular basis. However, anything a centimeter or above, I close.

From a teaching perspective, what are your comments on the Carter-Thomason system?

If a resident has basic laparoscopic skills, he or she can learn it relatively quickly. I taught a resident how to use the device during this morning's case. Another doctor who had worked with her, came in and asked, "Can you teach me next time?" and I said, "Absolutely." Actually, the resident I taught to use the device could probably teach the other physician. So, I think that it's not a complicated device. It's very easy. You can even do it without an assistant if you want, but it's very easy to teach to residents who have basic laparoscopic skills.

Do you normally close the ports or do you have an assistant or resident do that for you?

I'm usually there for the port closures. I stay for that because I think it's an important part of the procedure.

Do you let the assistant or resident do the actual physical close?

Yes, they physically close. I'm just there watching, but I let them do it. I'm there to supervise and make sure I'm happy with the result.

We use the term "full thickness closure", including fascia and peritoneum. What are your thoughts on that definition and does this represent what you're trying to achieve when closing a port site?

When you have a midline incision, the standard method of closing is a running mass closure, which includes: fascia; muscle; and peritoneum. So I think what you're trying to replicate is a true mass closure. It does cause more discomfort for the patient, no doubt, but that's a short term issue. I think what you're trying to achieve is that you want the fascia and the peritoneum to be closed, both of them, and the muscle's going to be a part of it.

We also use the words "simple" and "fast", to illustrate the efficiency of the system From your own experience, have you found this descriptions of the device system to be true?

Yes. Definitely. If I do it myself, it takes sixty seconds at the end of the case. If I'm doing it with an assistant maybe ninety seconds, but it is fast and easy to use. I think that description is point on, and I think that is one of the appeals of the system. It's not on a steep learning curve or a complicated device. It's very easy.

What are the key benefits in closing port sites with the Carter Thomason system from a patient perspective?

I think there's that risk of port site hernia which you are reducing significantly, maybe even eliminating to some extent. Certainly, I think you're eliminating the acute hernia, which is the most dangerous. Even long term, I've seen patients who had a hernia from where they've had a cholecystectomy. So, if you can get a good, true closure, you may be decreasing that risk for them as well. Definitely a benefit to the patient.

From a surgeon's perspective, what do you find to be the two or three key features that come to mind about the system?

It's easy, quick, cost effective... It's very inexpensive as compared to some of the other devices we've used in the operating room.

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