

# Bladeless Laparoscopy: A Multi-Centered, Cross-Disciplinary Prospective Study of a New Bladeless Laparoscopic Port

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## Study Objective

Trocar-related injuries continue to be one of the primary mechanisms of morbidity and mortality in laparoscopic general and gynecological surgery. In many studies, most or all of these complications were associated with the use of either bladed, "shielded" trocars, or "optical" trocars. We have begun to use a new type of bladeless port, the ADAPt asymmetrical dilating access port. We conducted a prospective, multi-centered, cross-disciplinary study to determine if these new ports reduced the incidence of the most commonly reported trocar-related complications.

## Design

From June to December 2003, we prospectively monitored consecutive gynecological and general laparoscopies at three facilities. 178 cases were completed, and the new bladeless ports were used at all port sites in all cases. Patients had an average of 1.5 previous abdominal surgeries (range=0-6).

The cases were monitored prospectively for several types of complications, including: *vascular injuries*, (retroperitoneal or intrafascial injuries), *visceral injuries*, including but not limited to bowel and bladder injuries, as well as *functional issues* such as difficulty of insertion, and the necessity of closing larger port sites.

## Conclusion

The new asymmetrical dilating ports avoided the complications commonly associated with bladed trocars in both gynecological and general surgery. Even in patients with previous abdominal surgeries, no port-related complications were encountered by any of the physicians. The ports went in easily and stayed in place well, even during long cases. Port-site closure was rarely necessary, even after cases several hours long. Postoperative incisional hernias did not occur.

## PATIENT SAMPLE

Total: 178 Patients

	Average	Range
Age (years)	38.6	16-79
Weight (lbs.)	150.2	105-260
Previous Abdominal Surgeries	1.5	0-6

A total of 551 ports were used, with 273 (49.5%) being large-bore, 10mm and 12mm ports. In 20 cases, the port was removed and the defect was enlarged to accommodate a morcellator. There have been no cases of postoperative incisional hernia.

## TOTAL COMPLICATIONS

	Total	%
<b>VASCULAR</b>		
Port-Site Bleeding	0	0
Intra-Abdominal Injury	0	0
<b>VISCERAL</b>		
Bowel	0	0
Bladder	0	0
Other	0	0
<b>PORT SITES ≥ 10mm REQUIRING FASCIAL CLOSING</b>		2/273 (0.7%)
<b>POSTOPERATIVE INCISIONAL HERNIA</b>	0	0
<b>TOTAL COMPLICATIONS</b>	0	0