# APPLICATION OF ROBOTIC ASSISTED LAPAROSCOPIC SURGERY FOR THE SAFE RESECTION OF LARGE ADRENAL LESIONS

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## Introduction

Minimally invasive surgery has many advantages over open surgery. Advancements in robotic surgery have increased the options for the minimally invasive approach to many surgical procedures as compared to the traditional laparoscopic approach. Laparoscopic adrenalectomy is a well described procedure, however it is not without limitations, with size of the adrenal lesion being a critical factor in the safety of a minimally invasive approach. Here we present a case that utilizes the robot for a minimally invasive approach to the safe resection of a large (>10 cm) adrenal lesion.

## Background

A 35 year old male with back pain was found to have a large (10.2 cm) fat containing mass superior to the right kidney, presumably an adrenal lesion (incidentaloma). He was referred to our clinic for surgical evaluation due to the size of the mass and back pain. A thorough workup, including laboratory analysis, showed the adrenal lesion to be nonfunctional. After a thorough discussion, the patient desired surgical resection. We planned for a minimally invasive approach to the adrenalectomy utilizing the robot and we counseled the patient that, due to the size of the mass, an open adrenalectomy may be necessary.

## Case Presentation

After an uneventful induction of general anesthesia, the patient was positioned in the left lateral decubitus position. We placed four robotic 8 mm trocars on the right side of the abdomen. Initially, there was concern about adequate exposure due to the patient having a large colon that was limiting access to the right upper quadrant. We docked the robot, and upon entry with the robotic camera and instruments, our exposure and access to the lesion was greatly improved. We were able to successfully mobilize and excise the adrenal lesion completely using the robotic approach. The mass was removed from the abdomen in an endocatch bag through a small right subcostal incision. The patient was then able to be discharged from the hospital on post operative day 1. Final pathology revealed an 11.5 cm adrenal myelolipoma.

## Conclusion

Here we report the safe and successful resection of a large (>10 cm) adrenal lesion with use of the robot for a minimally invasive approach. This demonstrates the feasibility of the robot for use in minimally invasive adrenalectomy where traditional laparoscopic techniques may not be possible.

## Imaging

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