

## Colorectal Surgery

## Next-generation wearable lighting system that can coexist with robotic surgery

Laparoscopic surgery and robotic surgery for colorectal cancer have increased significantly in recent years. Nevertheless, there are still cases, not limited to open surgery, wherein direct visual access is required and external light source remains indispensable, such as during perineal procedure in abdominoperineal resection, anal sphincter dissection in ISR, and coloanal anastomosis in conjunction with laparoscopic surgery (Fig. 1).

I used OPELA III, a “mobile-wearable OR light,” for direct visual anal procedure in robot-assisted ISR because I needed to illuminate the field at the appropriate angle I desire. In doing so, I felt that OPELA III, as a compact version of OR light,

was a light source that could coexist well with robotic surgery in the field of colorectal surgery.

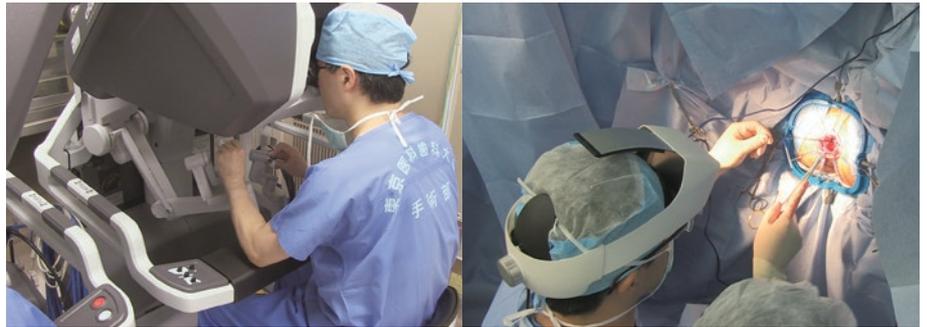


Fig. 1 | Robot operation in ISR/ direct visual procedure

## Light that illuminates anterior wall effortlessly

A problem with transanal procedure is that the light does not reach the anterior rectal wall. It is critical that I have a clear view of this area, yet illumination by conventional lighting has always had an issue. I usually shift the OR light constantly to illuminate the anus when performing anal procedure. However, a ceiling-mounted OR light has its limitation in terms of providing sufficient light at proper angles to areas where it is most needed.

Illumination of posterior walls can easily be achieved, but the anterior walls have always presented some difficulty. At Shizuoka Cancer Center, where I formerly worked, there used to be a mobile standing OR light, but here at the hospital I work now, using the same kind of light is simply impractical due to spatial constraints.

However, even with a standing OR light or any self-supporting OR light where the light shines from above in a downward direction, it struggles to illuminate exactly where I want to see because of the horizontal or upward angle of the surgical field

relative to my line of sight. This problem was resolved with the use of OPELA III as it illuminated deep areas even beyond the anterior walls, resulting in smooth and effortless operation (Fig. 2).

A while into the surgery, I turned off the OR light and performed the surgery with just OPELA III as the lone source of light. And it proved to be very bright, allowing me to perform the anterior wall procedures without any problem. As its size neither occupies space in the operating room nor in the equipment room, I would like to use it actively in surgeries involving anal procedures moving forward.



Fig. 2 | Transanal procedure can be performed with a bright view

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