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# Synergy<sup>ID</sup>™ Multispecialty Surgical Video System

Optimizes Visualization in Endoscopic and Laparoscopic Procedures for Luigi Boni, MD, FACS, at Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

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## Challenge

Surgeons must rely on skill, expertise, and training to perform common endoscopic, laparoscopic, and other minimally invasive procedures.

Traditional surgical imaging systems rely on standard light to visualize the surgical site, limiting what surgeons can see.

## Solution

Synergy<sup>ID</sup> Multispecialty Surgical Video System



## Results

The Synergy<sup>ID</sup> system combines state-of-the-art 4K visualization with superior augmented reality features, such as near-infrared fluorescence imaging, enabling surgeons like Dr. Boni to see more than ever before.



*“Having a system like the Synergy<sup>ID</sup> console that is able to detect minute amounts of fluorescence with crystal-clear image quality makes my surgeries more precise. The definition, illumination, and fluorescence features of the Synergy<sup>ID</sup> system are among the best I have experienced, and the level of support I have received from Arthrex is outstanding.”*

Luigi Boni, MD, FACS

For Dr. Boni, a pioneer in minimally invasive surgery and global opinion leader in fluorescence-guided and laparoscopic surgery, using fluorescence during surgery is like engaging GPS technology while driving.

“Basically, you can go home from work without the GPS, but by using the GPS you can actually get home faster, you can avoid certain streets because they’re too busy, and if you are in an unknown area, you can always find your way home easily. It is the same with the Synergy<sup>ID</sup> system; it gives you a road map of your surgery, making your surgery safer and more precise,” he said.





Dr. Boni serves as the Chief of the Department of Surgery at the Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, a 900-bed multispecialty teaching hospital serving the Milan, Italy, metropolitan area. Additionally, Dr. Boni is a professor of surgery at the University of Milan.

The hospital performs more than 24,000 surgeries each year, including a large spectrum of gastrointestinal surgeries with a focus on oncological, upper GI, lower GI, and bariatric procedures. More than 80% of these procedures are performed laparoscopically.

Over the past decade, Dr. Boni has used many leading systems, and when he began working with the Synergy<sup>ID</sup> multispecialty surgical video system from Arthrex in 2020, he immediately recognized its multitude of benefits.

“Having a system like the Synergy<sup>ID</sup> console that is able to detect minute amounts of fluorescence with crystal-clear image quality makes my surgeries more precise,” Dr. Boni said. “The definition, illumination, and fluorescence features of the Synergy<sup>ID</sup> system are among the best I have experienced, and the level of support I have received from Arthrex is outstanding.”

By combining state-of-the-art 4K visualization with superior augmented reality features, such as near-infrared fluorescence imaging, the Synergy<sup>ID</sup> system represents the latest advancement in multispecialty surgical imaging technology. For superior image quality throughout a procedure, the Synergy<sup>ID</sup> system provides real-time visible and near-infrared fluorescence

visualization. The system also features the world's first 4-chip camera head, which uses 4 imaging sensors, or “chips”: 3 to provide full 4K visible light imaging and 1 specifically designed to support fluorescence imaging.

Designed to prioritize surgeon preferences, the system streamlines workflows and maximizes outcomes. Depending on the specific fluorescence application, multiple mode and color options are available.

This flexibility is key for surgeons like Dr. Boni, who has found the Synergy<sup>ID</sup> system enables advanced visualization in virtually any surgical specialty. He has found the system to be invaluable for performing cholecystectomies. The variable fluorescence intensity provided by the Synergy<sup>ID</sup> system enables him to visualize the biliary tree in the gallbladder even when inflamed.

“The intensity can be adjusted to exactly what you need to see for a particular patient or a particular surgery. By adjusting the intensity of the fluorescence overlay shown on the surgical image, you can visualize fluorescence even when an anatomical structure is small or inflamed,” he said.

Dr. Boni has also used the Synergy<sup>ID</sup> system for gastric cancer cases, including during lymphadenectomies and esophagectomies. The variable fluorescence intensity enables visualization of anatomical structures, particularly lymph nodes, using small amounts of fluorescent dye. According to Dr. Boni, this means better contrast to see more than ever before.



“The amount of fluorescent dye required is very small compared to other systems. With the gallbladder, for instance, the small amount of dye helps prevent the liver parenchyma from getting too bright. The outcome is good fluorescence into the biliary tree, enabling detection of the biliary anatomy and a more precise surgery,” he said

Another aspect of the Synergy<sup>D</sup> system that stood out to Dr. Boni is the consistent quality of the image produced in any setting.

“In both modes, fluorescence and natural light, the image is always the same high quality any surgeon can rely on,” he said.

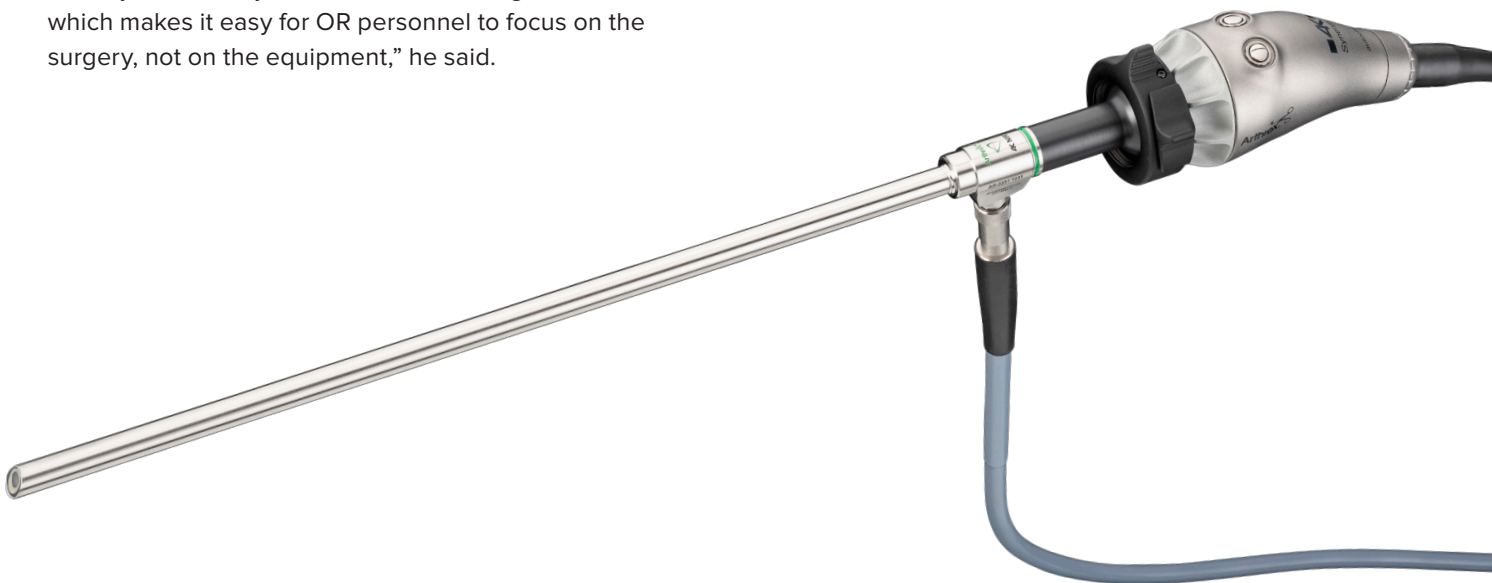
Dr. Boni also appreciates the Synergy<sup>D</sup> system’s surgeon-focused features, including the multiple customizable settings that enable each surgeon to set their exact preferences. The system’s simplicity for his OR team is a bonus.

“The system is very streamlined and straightforward, which makes it easy for OR personnel to focus on the surgery, not on the equipment,” he said.



Overall Dr. Boni has found the Synergy<sup>D</sup> system to be a versatile, powerful tool for a multitude of endoscopic and laparoscopic procedures. The combination of 4K visualization and superior augmented reality features, such as near-infrared fluorescence imaging, helps him perform more precise procedures.

“I have been using fluorescence-guided visualization systems for more than a decade. Based on my experience with the Synergy<sup>D</sup> platform, it is one of the best I have worked with. I feel confident using this state-of-the-art system for my surgeries. I know I’m providing the highest-quality care for my patients.”



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

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