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**SPY Fluorescence Imaging**

A bibliography of published clinical data, abstracts, and commentary.
SPY Fluorescence Imaging was launched in the United States in 2005. Since then, this new fluorescence imaging technology for tissue perfusion has quickly become one of the most studied imaging systems in medicine. Within this document, there are more than 200 articles of published clinical data, abstracts, and commentaries. These papers demonstrate how SPY Fluorescence Imaging can be utilized across multiple applications.

Information contained in the articles, which are referenced in this bibliography, may reflect the manner in which medical devices and related products are actually used by physicians in hospitals and clinics. As you are aware, physicians, in their practice of medicine, may use medical devices and pharmaceuticals in any manner they deem to be in the best interest of their patients, even if the device or pharmaceutical is not cleared or approved by the Food and Drug Administration (FDA) for such uses. This is typically referred to as “off-label” use.

**What is SPY Fluorescence Imaging?**

SPY Fluorescence Imaging utilizes laser generated, near infrared, light and Indocyanine Green (ICG) as the imaging agent. ICG has a well established safety profile and is processed through the liver and excreted within bile. Upon injection, the ICG binds to plasma proteins in the blood. The laser light source illuminates the surgical field with white light and low intensity, invisible, infrared light, causing the ICG to fluoresce. The camera system detects the fluorescing ICG as it passes through the arterial, capillary and venous phases of perfusion.

SPY Fluorescence Imaging is the primary technology in the SPY PHI, SPY Elite System, PINPOINT Endoscopic Fluorescence Imaging System, LUNA Fluorescence Imaging System, and Firefly Fluorescence Imaging System (da Vinci Si Surgical System). The indicated uses for these devices are perfusion assessment in cardiac surgery, plastic and reconstructive surgery, open and minimally invasive gastrointestinal surgery and wound assessment.

Stryker does not promote any off-label use that may be discussed in any of the articles referenced in this bibliography.

**Preface:**

Please note that the materials contained in this bibliography are for informational and educational purposes only.


47. Foppa C, Denoya PI, Tarta C, Bergamaschi R. Indocyanine green fluorescent dye during bowel surgery: Are the blood supply “guessing days” over? Tech Coloproctol. Published online February 21, 2014.


Liver and Hepatobiliary Surgery


**Plastic and Reconstructive Surgery**


169. Sood M, Glat P. Potential of the SPY intraoperative perfusion assessment system to reduce ischemic complications in immediate


194. Beckler AD, Ezzat WH, Seth R, Nabill V, Blackwell KE. Assessment of Fibula Flap Skin Perfusion in Patients Undergoing Oromandibular


204. Maxwell AK, Deleyiannis F W-B, MPhil. Utility of Indocyanine Green Angiography in Arterial Selection during Free Flap Harvest in Patients with Severe Peripheral Vascular Disease. PRS Global Open. Published online October 2016. Open Access. DOI:10.1097/GOX.0000000000001097


Vascular Surgery and Wound Care


218. Wyles CC, Jacobson SR, Houdek MT, Larson DR, Taunton MJ, Sim FH, Sierra RJ, Trousdale RT. Running Subcuticular Closure Enables the


