



HOAG MEMORIAL HOSPITAL PRESBYTERIAN
One Hoag Drive, PO Box 6100
Newport Beach, CA 92658-6100

Media Contact:
Heidi Pallares
Heidi.Pallares@Hoag.org
(949) 764-6939

Study Indicates Intraoperative Radiation for Early Breast Cancer Clinically Effective Alternative to Traditional Radiation Therapy

Hoag Study Indicates a Faster, Easier and More Cost-Effective Treatment Option for Low-Risk Women with Early Stage Breast Cancer

NEWPORT BEACH, Calif., October 11, 2018 --- An eight-year study, performed at [Hoag Memorial Hospital Presbyterian](#), Newport Beach, CA and supported by philanthropy has potential implications for how thousands of women are treated for breast cancer. The study findings, which were published on-line and in the October 2018 issue of the [Annals of Surgical Oncology](#) (Ann Surg Oncol {2018} 25:2987-2993), a leading peer-reviewed journal, found that [intraoperative radiation therapy \(IORT\)](#) is a clinically effective, faster and easier alternative to whole breast radiation therapy following breast-conserving surgery for selected low-risk patients.

IORT uses a miniaturized X-ray source to deliver a full course of targeted radiation directly within the tumor cavity where the cancer is most likely to recur, destroying cancer cells and reducing the risk of injury to nearby healthy tissues. IORT helps reduce potential side effects that are more common with whole breast irradiation and significantly reduces the amount of time required for treatment and recovery. [Hoag Memorial Hospital Presbyterian](#) utilizes iCAD's Xoft® Axxent® Electronic Brachytherapy (eBx®) System® to administer IORT treatments.

In traditional breast cancer treatment, radiation is delivered externally and to the entire breast. This process can take anywhere from 16 to 35 visits over a period of three to six weeks. IORT is delivered as a single dose of radiation therapy, during the surgical lumpectomy, eliminating weeks of travel and disruption to daily life. The total treatment time is an average of 11 minutes and is a quarter of the cost of traditional treatment. The early results demonstrate a recurrence rate following IORT in this study of 3.9 percent at four years, which is slightly higher than traditional whole breast radiation therapy, but far quicker and more cost-effective. Furthermore, using IORT initially does not eliminate the potential use of excision and whole breast radiation should there be a local recurrence in the future. These results while promising are still deemed



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to be early and therefore patients must be screened carefully by both surgeons and radiation oncologists to be considered eligible.

“On average, IORT can reduce 30 days of treatment to less than 30 minutes. The benefits are obvious,” said [Dr. Melvin Silverstein, M.D.](#), Medical Director of the Hoag Breast Center, Gross Family Foundation Endowed Chair in Oncoplastic Breast Surgery at Hoag, and Clinical Professor of Surgery at the Keck School of Medicine, Los Angeles, California. “Eliminating three to six weeks of radiation therapy reduces emotional stress and allows patients to quickly return to their normal life. Hoag’s highly experienced IORT team has treated more than 1,100 patients with IORT, the most cases to date for a single site in the United States. The results of this study have important implications for women around the country just diagnosed with breast cancer and currently considering their treatment options.”

The current paper reported the first 1,000 early-stage breast cancers (984 women) enrolled in a prospective X-ray IORT trial from June 2010 to August 2017. Patients included individuals 40 years of age and older, with lymph node negative cancer and with favorable pathology. All tumors were treated with breast-conserving surgery and IORT administered using the Xofig System. With a median follow-up of 36 months, there have been 28 ipsilateral local recurrences, ten of which were DCIS and 18 invasive. There have been four regional nodal recurrences and one distant recurrence. Fourteen non-breast cancer deaths have been reported, but there are no breast cancer deaths. The low complication rates reported by Hoag, as well as the low recurrence rates reported in this study, support the continued study of IORT in selected women with low-risk breast cancer.

About one-third of all patients with breast cancer could be candidates for IORT. According to the National Breast Cancer Foundation, it is estimated that more than 250,000 women will be diagnosed each year with breast cancer, which means about 84,000 women could be candidates for this procedure. IORT with the Xofig System is currently being administered at more than 50 sites worldwide and has been used to successfully treat more than 3,000 patients.

About Hoag Memorial Hospital Presbyterian

Hoag is an approximately \$1 billion nonprofit, regional health care delivery network in Orange County, California, that treats more than 30,000 inpatients and 425,000 outpatients annually. Hoag consists of two acute-care hospitals – Hoag Hospital Newport Beach, which opened in



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1952, and Hoag Hospital Irvine, which opened in 2010 – in addition to eight health centers and 11 urgent care centers. Hoag is a designated Magnet[®] hospital by the American Nurses Credentialing Center (ANCC). Hoag offers a comprehensive blend of health care services that includes five institutes providing specialized services in the following areas: [cancer](#), [heart and vascular](#), [neurosciences](#), [women's health](#), and orthopedics through Hoag's affiliate, [Hoag Orthopedic Institute](#), which consists of an orthopedic hospital and two ambulatory surgical centers. In 2013, Hoag entered into an alliance with St. Joseph Health to further expand health care services in the Orange County community, known as St. Joseph Hoag Health. Hoag has been named one of the Best Regional Hospitals in the 2018 - 2019 *U.S. News & World Report*, and *Becker's Healthcare* named Hoag as one of the 2018 "100 Great Hospitals in America" – a designation Hoag has received five times. For an unprecedented 22 years, residents of Orange County have chosen Hoag as one of the county's best hospitals in a local newspaper survey. Visit www.hoag.org for more information.

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