

## **Oncology Associates provides Surgical Oncology Services for Sharp Healthcare and Scripps Hospital systems.**

### **HIPEC (Hyperthermic Intraperitoneal Chemotherapy) Program**

Our advanced services include specialty treatment programs for cytoreductive surgery and heated intraperitoneal chemotherapy (HIPEC) for peritoneal carcinomatosis (cancers that have spread within the abdominal cavity). These tumors include cancers originating from the appendix, stomach, colon, rectum, ovary, primary peritoneal, sarcoma, and mesothelioma. Tumor cells originated from these cancers arising in the abdomen can spread by three different routes. These are: Blood vessel spread, lymphatic spread, and spread to the peritoneal lining. If the tumor has spread to the peritoneum a specialized technique called cytoreductive surgery is utilized to remove these tumors attached to the peritoneal surfaces. Some tumors involving the peritoneal lining are less aggressive and do not cause immediate life threatening situations. Patient's can have long term survival, but with time, these eventually have a fatal outcome with cancer progression within the abdomen. More aggressive tumors need to be treated before they become too extensive because eventually they will involve vital structures that cannot be removed. The best chance of removing the entire tumor depends on many factors: extent of tumor, location and histologic type.

### **Tumors Treated**

- Pseudomyxoma peritonei-PMP for appendiceal and ovarian cancers.
- Adenocarcinoma-appendix, colon, rectum, stomach, ovary, uterus, primary peritoneal.
- Sarcoma-soft tissue, GIST tumors, carcinoid, uterine.
- Mesothelioma.

### **Debulking or Cytoreduction**

The technique to remove the gross tumors on the peritoneum is called cytoreductive surgery. These are very complex procedures which include stripping the peritoneum (lining the abdomen) involved by the tumor. There are nine (9) peritoneal compartments within the abdomen. Some of these peritoneal areas involve portions of the intestine which may have to be removed as well.

Over the past 30 years, we have been treating tumors that have spread to the peritoneal cavity with a surgical technique called cytoreductive surgery. These procedures remove all the visible tumors leaving only microscopic residual disease or tiny deposits on the bowel surfaces and within the peritoneal fluid. Immediately after the cytoreductive procedures are completed, chemotherapy is delivered directly into the abdominal cavity. The chemotherapy solution delivered is heated to 109° F.

Heat is known to have a greater affect of killing tumor cells than normal cells. In addition, heat causes the tumor cell membrane to become more permeable to the

chemotherapy drugs delivered and thus thrust the drug into the cell resulting in cell death. The chemotherapy solution is delivered continuously for 60 to 90 minutes.

We have been performing cytoreductive surgeries for over 30 years. We are the first center to perform this procedure in the Western United States. We have an experienced team dedicated to the cytoreductive surgery program at Sharp Memorial Stephen Birch Hospital. The team includes nurses, medical oncologists, in-house 24 hour critical care specialists, pulmonologists, anesthesiologists, endocrinologists, and infectious disease physicians, all of whom have been part of our team and are very familiar with the care needed to get you through your hospitalization. We have one of the best invasive radiology departments in the country whose physicians are experienced in treating postoperative complications if they should occur.

These procedures are difficult and time consuming. The time of each operation depends on the number of peritoneal surfaces that are involved and the volume of tumor within the abdomen. The average length of these procedures is 8-10 hours, more extensive tumors, can take up to 20 hours.

For more aggressive tumors, systemic (intravenous) chemotherapy is given before the surgery to try to reduce the amount of tumor before performing the cytoreductive surgery.

Because of the magnitude of these surgeries, the postoperative complication rate is high. This will depend on the extent of surgery, time of surgery and blood loss.

### **Location and Preparation**

The surgery is performed at Sharp Memorial Stephen Birch Hospital located in San Diego, California. The new hospital was completed in January 2009. The hospital has all private rooms including those in the surgical, medical, and intensive care areas. One member of your family can stay in the room with you. Nearby discounted hotel rooms are available for other family members.

You can expect a stay in the ICU for one to three days after your surgery depending on its length and magnitude. You will be then transferred to the oncology floor. Both in the ICU and on the oncology floor, you will be cared for by nurses who have extensive experience in caring for those complex cases.

There are also excellent support services if needed including social services, pastoral care, rehabilitation, home nursing, and infusion therapy.

Under our care, you and your family become part of our family. You receive personalized service from Dr. Barone, other members of his team, and the hospital staff.

If you would like further information or would like to speak to one of our patients who have received care for HIPEC at our institution, please contact us.