

BroadcastMed | Hyperthermic Intraperitoneal Chemotherapy for Abdominal Cancers

HIPEC is used for very selected patients.

The strongest indications would be for peritoneal mesothelioma and when an appendiceal tumor has evidence of spread to the abdominal cavity.

Classically, that is considered the pseudomyxoma, where there is mucin throughout the abdomen.

I think those are the strongest indications where solid evidence has shown that surgical resection with HIPEC can extend these patients' lives.

We also use it for very selected patients, often after chemotherapy, who have had colorectal cancer with spread to the peritoneum or carcinomatosis. However, these patients, we would treat most commonly for six months of chemotherapy ahead of time to establish the disease biology.

And in those with stable disease or that you have a favorable response, a surgical approach can be considered.

The primary patients that are best candidates are those with appendiceal tumors that need monitoring.

Patients who are explored commonly for appendicitis often are presenting signs of this, they may get surgery for their appendix.

The patients who have mucin seen at surgery or in follow up on CAT scans are the best candidates for this procedure.

Patients with primary mesotheliomas, which are very rare, are also well-treated with HIPEC and surgical debulking.

The first step is surgical preparation before surgery.

We make sure we have the appropriate candidate as this is a long surgery.

It is probably best reserved for patients with a high-performance status.

The first steps of surgery are working with our anesthesiologist to secure good IV lines to place our temperature probes to monitor the patient's temperature.

And then we start our surgical exploration.

That step, we want to make sure we can resect all of the disease seen, as these are peritoneal surface malignancies, there can be cancer everywhere.

So we carefully look through the abdomen and then we, as a surgical team, decide whether to proceed with the bulking if we can do it safely.

That may or may not require resection of multiple organs.

After exploration, and if we feel like this will be successful, we start the resection.

And we try to do this in a systematic fashion, working through the quadrants of the abdomen.

Many times, this requires resection of the peritoneal lining to remove all the disease.

After we've achieved surgical debulking, we start the heated intraperitoneal chemotherapy.

We place inflow and outflow cannulas in the abdomen, which we close the abdomen around.

And then we establish a circuit, where we circulate fluid that we heat to a temperature of 41 degrees.

And then after we have a successful circuit, which is the fluid circulating around the abdomen without a leak with good flow, we'll start the chemotherapy, which lasts for 90 minutes.

All the while, carefully monitoring the patient's vitals as well as esophageal temperature and core body temperature.

After those 90 minutes, the chemotherapy is flushed with two liters of saline, and then that portion of the surgery is completed.

The cannulas are removed, we explore the abdomen, and if things appear stable, we close and finish the procedure.

The procedure is commonly done at tertiary referral centers because it takes a coordinated approach and it has logistic challenges in that you have to have a coordinated team, as well as technical challenges.

And oftentimes, patients are referred out of state for this procedure.

Our GI surgical team assessed our ability to perform this and we felt we could do it safely based on my training and the training of Dr. George, and we decided to bring the procedure back so we can offer it for our patients in the region.