

## New study for targeting ovarian tumors

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Delivering chemotherapy drugs directly to the abdomen through a catheter offers better results than other methods, but this regimen suffers from significant complications, and many patients are unable to complete it.

MIT researchers who are working on an implantable device that could make intraperitoneal chemotherapy more bearable have published a new study that offers insight into how to improve chemotherapy strategies for ovarian cancer, and how to determine which patients would be most likely to benefit from their device.

The findings suggest that the outcome of initial surgery plays a key role in the effectiveness of subsequent intraperitoneal chemotherapy. Cisplatin, one of the most commonly used drugs, effectively treats very tiny tumor cell clusters when it is delivered continuously or as a single large dose. But the researchers found that for larger tumor cell clusters, continuous delivery of cisplatin, at higher doses than are tolerable with the current periodic chemotherapy method, was more effective. The device they are developing would make delivery of such higher, continuous doses possible.

Their device is made of a drug-loaded polymer that could be inserted at the beginning of treatment and remain in place for the full treatment course, then removed with minimally invasive surgery. The researchers have tested proof-of-concept devices in mice and are now developing a version that could be tested in humans, though more animal studies are needed before human trials can begin.