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Subject: Hyperthermic Intraperitoneal Chemotherapy (HIPEC)

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

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DESCRIPTION:

Heated or hyperthermic intraperitoneal chemotherapy (HIPEC) is a procedure used to treat advanced abdominal cancers. HIPEC is performed during a surgical procedure to remove an abdominal tumor. Once the tumor has been removed ("cytoreduction"), a heated chemotherapy solution is circulated throughout the abdomen. Inflow and outflow catheters are placed in the abdominal cavity, along with temperature probes to monitor temperature. The skin is then temporarily closed during the chemotherapy perfusion, which typically runs for 1 to 2 hours.

HIPEC is used to treat various abdominal cancers spreading to peritoneal lining like pseudomyxoma peritonei, mucinous adenocarcinoma or appendix, mesothelioma, colorectal cancers, ovarian cancer, and gastric cancer. However the efficacy of HIPEC is not proven for all indications.

POSITION STATEMENT:

NOTE: This guideline addresses only hyperthermic intraperitoneal chemotherapy. Chemotherapy administration into peritoneal cavity, requiring and including peritoneocentesis (96446), without hyperthermia, **meets the definition of medical necessity** for the treatment of all primary and secondary peritoneal carcinoma.

Hyperthermic intraperitoneal chemotherapy (HIPEC) **meets the definition of medical necessity** when administered in conjunction with cytoreductive surgery for the treatment of the following diagnoses:

- Pseudomyxoma peritonei, **OR**
- Diffuse malignant peritoneal mesothelioma

Hyperthermic intraperitoneal chemotherapy (HIPEC) **meets the definition of medical necessity** in newly diagnosed epithelial ovarian or fallopian tube cancer at the time of interval cytoreductive surgery (refer to [DEFINITIONS](#) section), when **ALL** of the following criteria are met:

- Stage IIIA or stage IIIB disease (cancer has spread within the abdomen)
- Not eligible for initial cytoreductive surgery, or initial surgery had been performed but was incomplete and will receive neoadjuvant chemotherapy and subsequent interval debulking surgery
- It is expected that complete cytoreduction or optimal cytoreduction can be achieved at time of the interval debulking surgery

Hyperthermic intraperitoneal chemotherapy (HIPEC) in all other settings to treat ovarian cancer or fallopian tube cancer, including but not limited to stage IIIC or stage IV disease, is considered **experimental or investigational**. Data in published medical literature are inadequate to permit scientific conclusions on long-term and net health outcomes.

Hyperthermic intraperitoneal chemotherapy (HIPEC) is considered **experimental and investigational** for all other indications not listed above, including but not limited to peritoneal carcinomatosis arising from colorectal cancer, gastric cancer, or endometrial cancer; and goblet cell tumors of the appendix, due to the lack of peer-reviewed literature and clinical guidelines to establish its effectiveness.

BILLING/CODING INFORMATION:

CPT Coding

There is no specific code for hyperthermic intraperitoneal chemotherapy. The coding for this overall procedure would likely involve codes for the surgery, the intraperitoneal chemotherapy, and the hyperthermia and may include the following coding scenarios:

- Cytoreduction – There is no specific CPT code for the surgical component of this complex procedure. It is likely that a series of CPT codes would be used describing exploratory laparotomies of various components of the abdominal cavity, in addition to specific codes for resection of visceral organs, depending on the extent of the carcinomatosis.
- Intraperitoneal Chemotherapy – CPT code 96446 identifies “chemotherapy administration into peritoneal cavity via indwelling port or catheter”. When performed using a temporary catheter or performed intraoperatively, an unlisted code would be reported.
- Hyperthermia – CPT code 77605 identifies, “Hyperthermia, externally generated; deep.” There are no codes for the heating of the chemotherapy.

LOINC Codes:

The following information may be required documentation to support medical necessity: Physician history and physical, treatment plan, treatment notes including documentation of symptoms, behavioral or pharmacologic interventions, and prior test stimulation (if applicable).

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative

Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Attending physician visit note	18733-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Physician Initial Assessment	18736-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Attending physician progress note	18741-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Perioperative records	29752-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products:

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Hyperthermia for Treatment of Cancer (110.1) located at cms.gov.

DEFINITIONS:

Cytoreductive surgery: Surgical removal of as many cancerous tumor cells as possible. Cytoreduction can be complete (no visible disease left), optimal (one or more residual tumors measuring 10mm or less in diameter remaining) or suboptimal (more than 1 centimeter nodules left). Cytoreduction can also be primary (the first part of treatment), interval (after some chemotherapy is given), secondary (for recurrence) or tertiary (after several recurrences).

Fallopian tube cancer: Cancer that forms in the tissue lining the fallopian tube. The cancer sometimes begins at the end of the fallopian tube near the ovary and spreads to the ovary. Fallopian tube cancer is similar to ovarian epithelial cancer and is staged and treated the same way.

Ovarian cancer: Cancer that forms in tissues of the ovary. Most ovarian cancers are either ovarian epithelial cancers (cancer that begins in the cells on the surface of the ovary), or malignant germ cell tumors (cancer that begins in egg cells).

Peritoneal mesothelioma: Malignant peritoneal mesothelioma is a relatively uncommon malignancy that may arise from the mesothelial cells lining the pleura, peritoneum, pericardium, and tunica vaginalis testis.

Pseudomyxoma peritonei: Pseudomyxoma peritonei is a rare malignant growth characterized by the progressive accumulation of mucus-secreting (mucinous) tumor cells within the abdomen and pelvis. The disorder develops after a small growth (polyp) located within the appendix bursts through the wall of the appendix, and spreads mucus-producing tumor cells throughout the surrounding surfaces (e.g., the membrane that lines the abdominal cavity [peritoneum]). As mucinous tumor cells accumulate, the abdominal area becomes swollen and digestive (gastrointestinal) function becomes impaired. Synonyms for pseudomyxoma peritonei (according to the National Organization of Rare Disorders) may include:

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- Low grade appendiceal mucinous neoplasm (LAMN)
- Colloid carcinoma
- Disseminated peritoneal adenomucinosis (DPAM)
- Malignant appendiceal tumor
- Malignant large bowel cystadenocarcinoma
- Malignant large bowel peritoneal carcinomatosis
- Malignant large bowel tumor
- Mucinous cyst adenocarcinoma
- Mucinous cystadenoma
- Peritoneal carcinomatosis
- Peritoneal mucinous carcinomatosis (PMCA)
- PMP
- Pseudomyxoma ovarii

RELATED GUIDELINES:

None applicable.

OTHER:

None applicable.

REFERENCES:

1. Abu-Zaid A, et al. Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for managing peritoneal carcinomatosis from endometrial carcinoma: a single-center experience of 6 cases. Ann Saudi Med. 2014 Mar-Apr;34(2):159-66.

2. Al-Shammaa et al. Current status and future strategies of cytoreductive surgery plus intraperitoneal hyperthermic chemotherapy for peritoneal carcinomatosis. *World J Gastroenterol.* 2008 Feb 28;14(8):1159-66.
3. Baratti D, et al. Pseudomyxoma peritonei: Clinical and biological prognostic factors after cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. *American Society of Oncology* (2007).
4. Bereder J, Glehen O, Habre J, Desantis M, et al. American Society of Clinical Oncology. Cytoreductive surgery combined with perioperative intraperitoneal chemotherapy for the management of peritoneal carcinomatosis from ovarian cancer: A multiinstitutional study of 246 patients. *J Clin Oncol* 27:15s. 2009 (suppl; abstr 5542).
5. Blue Cross Blue Shield Association Medical Policy Reference Manual. Policy 2.03.07, Cytoreductive Surgery and Perioperative Intraperitoneal Chemotherapy for Select Intra-Abdominal and Pelvic Malignancies (October 2018).
6. Centers for Medicare and Medicaid Services National Coverage Determination (NCD) for Hyperthermia for Treatment of Cancer (110.1) (12/31/84).
7. Chiva, L. M., and A. Gonzalez-Martin. A critical appraisal of hyperthermic intraperitoneal chemotherapy (HIPEC) in the treatment of advanced and recurrent ovarian cancer. *Gynecologic oncology* 136.1 (2015): 130.
8. Chua et al. Intraoperative hyperthermic intraperitoneal chemotherapy after cytoreductive surgery in ovarian cancer peritoneal carcinomatosis: systematic review of current results. *J Cancer Res Clin Oncol.* 2009 Dec;135(12):1637-45. Epub 2009 Aug 23.
9. Cioppa et al. Cytoreduction and hyperthermic intraperitoneal chemotherapy in the treatment of peritoneal carcinomatosis from pseudomixoma peritonei.
10. ClinicalTrials.gov. Hyperthermic Intraoperative Intraperitoneal Chemotherapy of Recurrent Ovarian Cancer – A Feasibility Study. NCT 00968799.
11. ClinicalTrials.gov. Secondary Debulking Surgery +/- Hyperthermic Intraperitoneal Chemotherapy in Stage III Ovarian Cancer. NCT 00426257.
12. ClinicalTrials.gov. Intraperitoneal Hyperthermic Chemotherapy in Epithelial Ovarian Carcinoma. NCT00349505.
13. ClinicalTrials.gov. Surgery Plus Intraoperative Peritoneal Hyperthermic Chemotherapy to Treat Peritoneal Carcinomatosis. NCT 00454519.
14. Di Giorgio et al. Cytoreductive surgery (peritonectomy procedures) combined with hyperthermic intraperitoneal chemotherapy (HIPEC) in the treatment of diffuse peritoneal carcinomatosis from ovarian cancer. *Cancer.* 2008 Jul 15;113(2):315-25.
15. Esquivel J, Sticca R, Sugarbaker P et al. Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in the management of peritoneal surface malignancies of colonic origin: a consensus statement. *Society of Surgical Oncology. Ann Surg Oncol* 2007; 14(1):128-33.
16. Glockzin G. Peritoneal carcinomatosis: patients selection, perioperative complications and quality of life related to cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. *World J Surg Oncol.* 2009 Jan 8;7:5.
17. Hotouras A, et al. Heated IntraPERitoneal Chemotherapy (HIPEC) for Patients With Recurrent Ovarian Cancer: A Systematic Literature Review. *Int J Gynecol Cancer.* 2016 May;26(4):661-70.
18. Königsrainer, I., et al. Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in recurrent epithelial ovarian cancer with peritoneal metastases: a single centre experience. *Langenbeck's archives of surgery/Deutsche Gesellschaft für Chirurgie* 399.5 (2014): 589.

19. Levine EA, Ronnett BM, Mansfield PF, Eng C. Overview of Cytoreductive Surgery and Intraperitoneal Hyperthermic Chemotherapy for Peritoneal Dissemination of Appendiceal and Colorectal Neoplasms. American Society of Clinical Oncology 2008.
20. Li Y, Yang X, Yang G, Zhou Y, Yonrmura Y. An evaluation of cytoreductive surgery plus hyperthermic intraperitoneal chemotherapy on patients with peritoneal carcinomatosis: Final results of a phase II prospective and randomized clinical trial. *J Clin Oncol* 29: 2011 (suppl; abstr 4051)
21. Magge D, et al. Hyperthermic intraperitoneal chemoperfusion as a component of multimodality therapy for ovarian and primary peritoneal cancer. *J Surg Oncol*. 2017 Sep;116(3):320-328.
22. National Cancer Institute (NCI). Cervical cancer treatment (PDQ). Health Professional Version. PDQ Cancer Information Summaries: Adult Treatment. Bethesda, MD: NCI; updated May 16, 2008.
23. National Cancer Institute at the National Institutes of Health. Fallopian tube cancer. Accessed at <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/>.
24. National Comprehensive Cancer Network (NCCN). Colon cancer. NCCN Clinical Practice Guidelines in Oncology. v.2.2009. Fort Washington, PA: NCCN; 2009.
25. National Institute for Clinical Excellence (NICE). Complete cytoreduction and heated intraoperative intraperitoneal chemotherapy (Sugarbaker technique) for peritoneal carcinomatosis. Interventional Procedure Guidance 116. London, UK: NICE; March 2005. Available at: <http://www.nice.org.uk/nicemedia/pdf/ip/IPG116guidance.pdf>. Accessed March 23, 2005.
26. National Institute for Clinical Excellence. Complete cytoreduction for pseudomyxoma peritonei (Sugarbaker technique). Interventional Procedure Guidance 56. London, UK: NICE; April 2004. Available at: <http://www.nice.org.uk/nicemedia/pdf/IPG056guidance.pdf>. Accessed May 27, 2005.
27. National Organization for Rare Disorders (NORD). Pseudomyxoma Peritonei . Accessed at <https://rarediseases.org/rare-diseases/pseudomyxoma-peritonei/>.
28. Piso P, Glockzin G, Schlitt HJ. Cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in patients with peritoneal carcinomatosis arising from gastric cancer. *J Clin Oncol* 29: 2011 (suppl 4; abstr 132)
29. Quenet F, Claus C, Roca L, Gauthey A, et al. Complete cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for peritoneal carcinomatosis from digestive tract cancer. New management with oxaliplatin plus irinotecan: A feasibility study in 37 patients. *J Clin Oncol* 26:2008 (May 20 suppl: abstr 4084).
30. Randle RW, et al. Cytoreductive Surgery with Hyperthermic Intraperitoneal Chemotherapy in Peritoneal Sarcomatosis. *Am Surg*. 2013 June; 79(6): 620–624.
31. Rudloff, U., et al. Impact of maximal cytoreductive surgery plus regional heated intraperitoneal chemotherapy (HIPEC) on outcome of patients with peritoneal carcinomatosis of gastric origin: results of the GYMSSA trial. *Journal of surgical oncology* 110.3 (2014): 275.
32. Sardi A, et al. Repeated cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in peritoneal carcinomatosis from appendiceal cancer: analysis of survival outcomes. *Eur J Surg Oncol*. 2013 Nov;39(11):1207-13.
33. Sideris et al. Surgical cytoreduction and intraperitoneal chemotherapy for peritoneal carcinomatosis arising from the appendix. *Can J Surg*. 2009 Apr;52(2):135-41.
34. Smeenk et al. Survival Analysis of Pseudomyxoma Peritonei Patients Treated by Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy. *Ann Surg*. 2007 Jan;245(1):104-9.
35. Turaga, K., et al. Consensus guidelines from The American Society of Peritoneal Surface Malignancies on standardizing the delivery of hyperthermic intraperitoneal chemotherapy (HIPEC) in colorectal cancer patients in the United States. *Annals of surgical oncology* 21.5 (2014): 1501.

36. Vaira et al. Management of Pseudomyxoma Peritonei by Cytoreduction+HIPEC (Hyperthermic Intraperitoneal Chemotherapy): Results Analysis of a Twelve-year Experience. *In Vivo*. 2009 Jul-Aug;23(4):639-44.
37. van Driel WJ, Koole SN, Sikorska K, et al. Hyperthermic intraperitoneal chemotherapy in ovarian cancer. *N Engl J Med*. Jan 18 2018;378(3):230-240. PMID 29342393.
38. Yang XJ, Huang CQ, Suo T, Mei LJ, Yang GL, Cheng FL, Zhou YF, Xiong B, Yonemura Y, Li Y. Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy improves survival of patients with peritoneal carcinomatosis from gastric cancer: final results of a phase III randomized clinical trial. *Ann Surg Oncol*. 2011 Jun;18(6):1575-81. Epub 2011 Mar 23.
39. Yarema, R. R., et al. Hyperthermic intraperitoneal chemoperfusion in combined treatment of locally advanced and disseminated gastric cancer: results of a single-centre retrospective study. *International journal of hyperthermia: the official journal of European Society for Hyperthermic Oncology, North American Hyperthermia Group* 30.3 (2014): 159.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 01/24/19.

GUIDELINE UPDATE INFORMATION:

02/15/10	New Medical Coverage Guideline.
08/01/10	Revised coding information.
09/15/10	Revisions consisting of Position Statement clarification and formatting changes.
10/15/10	Revision; related ICD-10 codes added.
01/01/11	Annual HCPCS coding update: deleted coding reference to 96445; added 96446.
09/15/11	Revision; formatting changes.
02/15/12	Scheduled review; position statement updated to include peritoneal mesothelioma; Billing/Coding section updated; references updated; formatting changes.
05/11/14	Revision: Program Exceptions section updated.
05/15/15	Revision: Position Statement language regarding peritoneal carcinoma revised for clarity.
11/01/15	Revision: ICD-9 Codes deleted.
09/15/16	Scheduled review. Revised description section, investigational indications, and Billing/Coding Information section. Updated references.

10/01/16	Revision: Billing/Coding Information section updated.
02/15/19	Revision: added coverage criteria for newly diagnosed epithelial ovarian or fallopian tube cancer. Revised definitions. Updated references.