If a conflict arises between a Clinical Payment and Coding Policy and any plan document under which a member is entitled to Covered Services, the plan document will govern. If a conflict arises between a CPCP and any provider contract pursuant to which a provider participates in and/or provides Covered Services to eligible member(s) and/or plans, the provider contract will govern. "Plan documents" include, but are not limited to, Certificates of Health Care Benefits, benefit booklets, Summary Plan Descriptions, and other coverage documents. Blue Cross and Blue Shield of Illinois may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSIL has full and final discretionary authority for their interpretation and application to the extent provided under any applicable plan documents.

Providers are responsible for submission of accurate documentation of services performed. Providers are expected to submit claims for services rendered using valid code combinations from Health Insurance Portability and Accountability Act approved code sets. Claims should be coded appropriately according to industry standard coding guidelines including, but not limited to: Uniform Billing Editor, American Medical Association, Current Procedural Terminology, CPT® Assistant, Healthcare Common Procedure Coding System, ICD-10 CM and PCS, National Drug Codes, Diagnosis Related Group guidelines, Centers for Medicare and Medicaid Services National Correct Coding Initiative Policy Manual, CCI table edits and other CMS guidelines.

Claims are subject to the code edit protocols for services/procedures billed. Claim submissions are subject to claim review including but not limited to, any terms of benefit coverage, provider contract language, medical policies, clinical payment and coding policies as well as coding software logic. Upon request, the provider is urged to submit any additional documentation.

In Vitro Chemoresistance and Chemosensitivity Assays

Policy Number: CPCPLAB030

Version 1.0

Approval Date: September 25, 2025

Plan Effective Date: January 1, 2026

Description

The Plan has implemented certain lab management reimbursement criteria. Not all requirements apply to each product. Providers are urged to review Plan documents for eligible coverage for services rendered.

Reimbursement Information:

1. In vitro chemosensitivity assays, (e.g., histoculture drug response assay, fluorescent cytoprint assay) **are not reimbursable.**

2. In vitro chemoresistance assays, (e.g., extreme drug resistance [EDR] assays) **are not reimbursable**.

Procedure Codes

The following is not an all-encompassing code list. The inclusion of a code does not guarantee it is a covered service or eligible for reimbursement.

Codes
81535, 81536, 86849, 88104, 88199, 88305, 88313, 88358, 89050, 89240, 0083U, 0248U, 0249U, 0285U, 0435U, 0525U

References:

1. Schrag D, Garewal HS, Burstein HJ, Samson DJ, Von Hoff DD, Somerfield MR. American Society of Clinical Oncology Technology Assessment: chemotherapy sensitivity and resistance assays. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*. Sep 01 2004;22(17):3631-8. doi:10.1200/jco.2004.05.065
2. Hatok J, Babusikova E, Matakova T, Mistuna D, Dobrota D, Racay P. In vitro assays for the evaluation of drug resistance in tumor cells. *Clinical and experimental medicine*. Mar 2009;9(1):1-7. doi:10.1007/s10238-008-0011-3
3. Tatar B, Boyraz G, Selçuk İ, Doğan AK, Usubütün A, Tuncer ZS. In vitro chemosensitivity in ovarian carcinoma: Comparison of three leading assays. *J Turk Ger Gynecol Assoc*. 2016;17(1):35-40. doi:10.5152/jtgga.2016.16017
4. Brower SL, Fensterer JE, Bush JE. The ChemoFx® Assay: An Ex Vivo Chemosensitivity and Resistance Assay for Predicting Patient Response to Cancer Chemotherapy. *Apoptosis and Cancer: Methods and Protocols*. 2008// 2008:57-78. doi:10.1007/978-1-59745-339-4_6

5. Grendys EC, Jr., Fiorica JV, Orr JW, Jr., et al. Overview of a chemoresponse assay in ovarian cancer. *Clinical & translational oncology : official publication of the Federation of Spanish Oncology Societies and of the National Cancer Institute of Mexico*. Sep 2014;16(9):761-9. doi:10.1007/s12094-014-1192-8
6. Pierian. Products: ChemoINTEL™. https://www.pierianbio.com/
7. RGCC. Onconomics RGCC. https://www.rgcc-group.com/tests/onconomics-plus-rgcc/
8. Karam AK, Chiang JW, Fung E, Nossov V, Karlan BY. Extreme drug resistance assay results do not influence survival in women with epithelial ovarian cancer. *Gynecologic Oncology*. 2009/08/01/ 2009;114(2):246-252. doi:10.1016/j.ygyno.2009.02.022
9. Kiyatec. 3D Predict Platform. https://kiyatec.com/healthcare-professionals/3d-predict-platform/
10. Kwon HY, Kim IK, Kang J, Sohn SK, Lee KY. In Vitro Adenosine Triphosphate-Based Chemotherapy Response Assay as a Predictor of Clinical Response to Fluorouracil-Based Adjuvant Chemotherapy in Stage II Colorectal Cancer. *Cancer research and treatment : official journal of Korean Cancer Association*. Jul 2016;48(3):970-7. doi:10.4143/crt.2015.140
11. Krivak TC, Lele S, Richard S, et al. A chemoresponse assay for prediction of platinum resistance in primary ovarian cancer. *American journal of obstetrics and gynecology*. Jul 2014;211(1):68.e1-8. doi:10.1016/j.ajog.2014.02.009
12. Rutherford T, Orr J, Jr., Grendys E, Jr., et al. A prospective study evaluating the clinical relevance of a chemoresponse assay for treatment of patients with persistent or recurrent ovarian cancer. *Gynecol Oncol*. Nov 2013;131(2):362-7. doi:10.1016/j.ygyno.2013.08.009
13. Hoffman RM. Clinical Correlation of the Histoculture Drug Response Assay in Gastrointestinal Cancer. *Methods in molecular biology (Clifton, NJ)*. 2018;1760:61-72. doi:10.1007/978-1-4939-7745-1_7
14. Strickland SA, Raptis A, Hallquist A, et al. Correlation of the microculture-kinetic drug-induced apoptosis assay with patient outcomes in initial treatment of adult acute myelocytic leukemia. *Leukemia & lymphoma*. Mar 2013;54(3):528-34. doi:10.3109/10428194.2012.722217
15. Howard CM, Valluri J, Alberico A, et al. Analysis of Chemopredictive Assay for Targeting Cancer Stem Cells in Glioblastoma Patients. *Transl Oncol*. Apr 2017;10(2):241-254. doi:10.1016/j.tranon.2017.01.008
16. Chen Z, Zhang S, Ma S, et al. Evaluation of the in vitro Chemosensitivity and Correlation with Clinical Outcomes in Lung Cancer using the ATP-TCA. *Anticancer Agents Med Chem*. 2018;18(1):139-145. doi:10.2174/1871520617666170419123713
17. Shuford S, Lipinski L, Abad A, et al. Prospective prediction of clinical drug response in high-grade gliomas using an ex vivo 3D cell culture assay. *Neurooncol Adv*. Jan-Dec 2021;3(1):vdab065. doi:10.1093/noajnl/vdab065
18. Burstein HJ, Mangu PB, Somerfield MR, et al. American Society of Clinical Oncology clinical practice guideline update on the use of chemotherapy sensitivity and resistance assays. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*. Aug 20 2011;29(24):3328-30. doi:10.1200/jco.2011.36.0354
19. NCCN. NCCN Clinical Practice Guidelines in Oncology; Ovarian Cancer v2.2025. https://www.nccn.org/professionals/physician_gls/pdf/ovarian.pdf

20. NCCN. NCCN Clinical Practice Guidelines in Oncology. https://www.nccn.org/professionals/physician_gls/default.aspx

Policy Update History:

Approval Date	Effective Date; Summary of Changes
09/25/2025	01/01/2026: New policy.