



If a conflict arises between a Clinical Payment and Coding Policy (“CPCP”) 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. BCBSOK may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSOK 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 (“HIPAA”) approved code sets. Claims should be coded appropriately according to industry standard coding guidelines including, but not limited to: Uniform Billing (“UB”) Editor, American Medical Association (“AMA”), Current Procedural Terminology (“CPT®”), CPT® Assistant, Healthcare Common Procedure Coding System (“HCPCS”), ICD-10 CM and PCS, National Drug Codes (“NDC”), Diagnosis Related Group (“DRG”) guidelines, Centers for Medicare and Medicaid Services (“CMS”) National Correct Coding Initiative (“NCCI”) 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.

Measurement of Thromboxane Metabolites for ASA Resistance

Policy Number: CPCPLAB031

Version 1.0

Plan Effective Date: Nov. 1, 2022

Description

BCBSOK 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:

The measurement of thromboxane metabolites in urine (e.g., AspirinWorks) to evaluate aspirin resistance **is not reimbursable** for all indications.

Procedure Codes

Codes
82570, 84431

References:

- Abrams, C. (2021). Platelet biology. Retrieved from https://www.uptodate.com/contents/platelet-biology?search=Aspirin%20metabolite%20thromboxane&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2#H10
- Abramson, S. (2021). Aspirin: Mechanism of action, major toxicities, and use in rheumatic diseases. Retrieved from <https://www.uptodate.com/contents/aspirin-mechanism-of-action-major-toxicities-and-use-in-rheumatic-diseases>
- Aradi, D., Collet, J. P., Mair, J., Plebani, M., Merkely, B., Jaffe, A. S., . . . Huber, K. (2015). Platelet function testing in acute cardiac care - is there a role for prediction or prevention of stent thrombosis and bleeding? *Thromb Haemost*, 113(2), 221-230. doi:10.1160/th14-05-0449
- Bij de Weg, J. M., Abheiden, C. N. H., Fuijkschot, W. W., Harmsze, A. M., de Boer, M. A., Thijs, A., & de Vries, J. I. P. (2020). Resistance of aspirin during and after pregnancy: A longitudinal cohort study. *Pregnancy Hypertens*, 19, 25-30. doi:10.1016/j.preghy.2019.11.008
- Douketis, J. D., Spyropoulos, A. C., Spencer, F. A., Mayr, M., Jaffer, A. K., Eckman, M. H., . . . Kunz, R. (2012). Perioperative Management of Antithrombotic Therapy: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest*, 141(2), e326S-e350S. doi:10.1378/chest.11-2298
- Dretzke, J., Riley, R. D., Lordkipanidze, M., Jowett, S., O'Donnell, J., Ensor, J., . . . Moore, D. (2015). The prognostic utility of tests of platelet function for the detection of 'aspirin resistance' in patients with established cardiovascular or cerebrovascular disease: a systematic review and economic evaluation. *Health Technol Assess*, 19(37), 1-366. doi:10.3310/hta19370
- Ebrahimi, P., Farhadi, Z., Behzadifar, M., Shabaninejad, H., Abolghasem Gorji, H., Taheri Mirghaed, M., . . . Sohrabi, R. (2020). Prevalence rate of laboratory defined aspirin resistance in cardiovascular disease patients: A systematic review and meta-analysis. *Caspian J Intern Med*, 11(2), 124-134. doi:10.22088/cjim.11.2.124
- FDA. (2004). Accumetrics VerifyNow-Aspirin Assay. Retrieved from https://www.accessdata.fda.gov/cdrh_docs/pdf4/k042423.pdf
- FDA. (2007). 510(K-) Summary. Retrieved from https://www.accessdata.fda.gov/cdrh_docs/pdf6/K062025.pdf
- FDA. (2015). 510(K-) Summary. Retrieved from https://www.accessdata.fda.gov/cdrh_docs/pdf6/K062025.pdf
- Geske, F. J., Guyer, K. E., & Ens, G. (2008). AspirinWorks: a new immunologic diagnostic test for monitoring aspirin effect. *Mol Diagn Ther*, 12(1), 51-54. Retrieved from <http://dx.doi.org/>
- Gillet, B., Ianotto, J. C., Mingant, F., Didier, R., Gilard, M., Ugo, V., . . . Galinat, H. (2016). Multiple Electrode Aggregometry is an adequate method for aspirin response testing in myeloproliferative neoplasms and differentiates the mechanisms of aspirin resistance. *Thromb Res*, 142, 26-32. doi:10.1016/j.thromres.2016.04.006

Gum, P. A., Kottke-Marchant, K., Poggio, E. D., Gurm, H., Welsh, P. A., Brooks, L., . . . Topol, E. J. (2001). Profile and prevalence of aspirin resistance in patients with cardiovascular disease. *Am J Cardiol*, 88(3), 230-235. doi:10.1016/s0002-9149(01)01631-9

Harrison, P., Bethel, M. A., Kennedy, I., Dinsdale, R., Coleman, R., & Holman, R. R. (2018). Comparison of nine platelet function tests used to determine responses to different aspirin dosages in people with type 2 diabetes. *Platelets*, 1-9. doi:10.1080/09537104.2018.1478402

Helena_Laboratories. (2021). Plateletworks. Retrieved from <https://www.helena.com/plateletworks.htm>

Krasopoulos, G., Brister, S. J., Beattie, W. S., & Buchanan, M. R. (2008). Aspirin "resistance" and risk of cardiovascular morbidity: systematic review and meta-analysis. *Bmj*, 336(7637), 195-198. doi:10.1136/bmj.39430.529549.BE

Lordkipanidze, M., Pharand, C., Schampaert, E., Turgeon, J., Palisaitis, D. A., & Diodati, J. G. (2007). A comparison of six major platelet function tests to determine the prevalence of aspirin resistance in patients with stable coronary artery disease. *Eur Heart J*, 28(14), 1702-1708. doi:10.1093/eurheartj/ehm226

Mahla, E., Tantry, U. S., Schoerghuber, M., & Gurbel, P. A. (2020). Platelet Function Testing in Patients on Antiplatelet Therapy before Cardiac Surgery. *Anesthesiology*, 133(6), 1263-1276. doi:10.1097/aln.0000000000003541

Martin, C. P., & Talbert, R. L. (2005). Aspirin resistance: an evaluation of current evidence and measurement methods. *Pharmacotherapy*, 25(7), 942-953.

Michelson, A. D., Cattaneo, M., Eikelboom, J. W., Gurbel, P., Kottke-Marchant, K., Kunicki, T. J., . . . Rao, A. K. (2005). Aspirin resistance: position paper of the Working Group on Aspirin Resistance. *J Thromb Haemost*, 3(6), 1309-1311. doi:10.1111/j.1538-7836.2005.01351.x

Paniccia, R., Priora, R., Liotta, A. A., & Abbate, R. (2015). Platelet function tests: a comparative review. *Vasc Health Risk Manag*, 11, 133-148. doi:10.2147/vhrm.S44469

Piao, J., Yoo, C., Kim, S., Whang, Y.-W., Choi, C. U., & Shin, S. (2021). Performance comparison of aspirin assay between anysis and verifynow: Assessment of therapeutic platelet inhibition in patients with cardiac diseases. *Clinical Hemorheology and Microcirculation, Preprint*, 1-8. doi:10.3233/CH-211171

Singh, S., Ronde, M. W. J. d., Creemers, E. E., Made, I. V. d., Meijering, R., Chan, M. Y., . . . Pinto-Sietsma, S. J. (2021). Low miR-19b-1-5p Expression Is Related to Aspirin Resistance and Major Adverse Cardiovascular Events in Patients With Acute Coronary Syndrome. *Journal of the American Heart Association*, 10(2), e017120. doi:10.1161/JAHA.120.017120

Smock, K. J., & Rodgers, G. M. (2010). Laboratory evaluation of aspirin responsiveness. *Am J Hematol*, 85(5), 358-360. doi:10.1002/ajh.21674

Spahn, D. R., Bouillon, B., Cerny, V., Duranteau, J., Filipescu, D., Hunt, B. J., . . . Rossaint, R. (2019). The European guideline on management of major bleeding and coagulopathy following trauma: fifth edition. *Crit Care*, 23(1), 98. doi:10.1186/s13054-019-2347-3

Wang, N., Vendrov, K. C., Simmons, B. P., Schuck, R. N., Stouffer, G. A., & Lee, C. R. (2018). Urinary 11-dehydro-thromboxane B2 levels are associated with vascular inflammation and prognosis in atherosclerotic cardiovascular disease. *Prostaglandins Other Lipid Mediat*, 134, 24-31. doi:10.1016/j.prostaglandins.2017.11.003

Zehnder, J., Tantry, U., & Gurbel, P. (2019). Nonresponse and resistance to aspirin - UpToDate. In H. Libman & G. Saperia (Eds.), *UpToDate*. Retrieved from https://www.uptodate.com/contents/nonresponse-and-resistance-to-aspirin?source=search_result&search=aspirin%20resistance&selectedTitle=1~12#H2044812

Policy Update History:

11/1/2022	New policy
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