

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. BCBSNM may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSNM 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.

Genetic Testing for Adolescent Idiopathic Scoliosis

Policy Number: CPCPLAB060

Version 1.0

Enterprise Medical Policy Committee Approval Date: 1/25/2022

Plan Effective Date: May 1, 2022

Description

BCBSNM 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:

DNA-based prognostic testing for adolescent idiopathic scoliosis **is not reimbursable**.

Procedure Codes

Codes
0004M

References:

- AAFP. (2018). Scoliosis - Clinical Preventive Service Recommendation. Retrieved 2/26/21, from @aafp <https://www.aafp.org/patient-care/clinical-recommendations/all/scoliosis.html>
- Acaroglu, E., Akel, I., Alanay, A., Yazici, M., & Marcucio, R. (2009). Comparison of the melatonin and calmodulin in paravertebral muscle and platelets of patients with or without adolescent idiopathic scoliosis. *Spine (Phila Pa 1976)*, 34(18), E659-663. doi:10.1097/BRS.0b013e3181a3c7a2
- Baschal, E. E., Wethey, C. I., Swindle, K., Baschal, R. M., Gowan, K., Tang, N. L., . . . Miller, N. H. (2014). Exome sequencing identifies a rare HSPG2 variant associated with familial idiopathic scoliosis. *G3 (Bethesda)*, 5(2), 167-174. doi:10.1534/g3.114.015669
- Buchan, J. G., Alvarado, D. M., Haller, G. E., Cruchaga, C., Harms, M. B., Zhang, T., . . . Gurnett, C. A. (2014). Rare variants in FBN1 and FBN2 are associated with severe adolescent idiopathic scoliosis. *Hum Mol Genet*, 23(19), 5271-5282. doi:10.1093/hmg/ddu224
- Cheung, C. S., Lee, W. T., Tse, Y. K., Lee, K. M., Guo, X., Qin, L., & Cheng, J. C. (2006). Generalized osteopenia in adolescent idiopathic scoliosis--association with abnormal pubertal growth, bone turnover, and calcium intake? *Spine (Phila Pa 1976)*, 31(3), 330-338. doi:10.1097/01.brs.0000197410.92525.10
- FDA. (2021). Devices@FDA. Retrieved from <https://www.accessdata.fda.gov/scripts/cdrh/devicesatfda/index.cfm>
- Gerdhem, P., Topalis, C., Grauers, A., Stubendorff, J., Ohlin, A., & Karlsson, K. M. (2015). Serum level of cartilage oligomeric matrix protein is lower in children with idiopathic scoliosis than in non-scoliotic controls. *Eur Spine J*, 24(2), 256-261. doi:10.1007/s00586-014-3691-2
- Grauers, A., Einarsdottir, E., & Gerdhem, P. (2016). Genetics and pathogenesis of idiopathic scoliosis. *Scoliosis Spinal Disord*, 11, 45. doi:10.1186/s13013-016-0105-8
- Grossman, D. C., Curry, S. J., Owens, D. K., Barry, M. J., Davidson, K. W., Doubeni, C. A., . . . Tseng, C. W. (2018). Screening for Adolescent Idiopathic Scoliosis: US Preventive Services Task Force Recommendation Statement. *JAMA*, 319(2), 165-172. doi:10.1001/jama.2017.19342
- Guo, X., Chau, W. W., Chan, Y. L., & Cheng, J. C. (2003). Relative anterior spinal overgrowth in adolescent idiopathic scoliosis. Results of disproportionate endochondral-membranous bone growth. *J Bone Joint Surg Br*, 85(7), 1026-1031. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/14516040>
- Haller, G., Alvarado, D., McCall, K., Yang, P., Cruchaga, C., Harms, M., . . . Gurnett, C. A. (2016). A polygenic burden of rare variants across extracellular matrix genes among individuals with adolescent idiopathic scoliosis. *Hum Mol Genet*, 25(1), 202-209. doi:10.1093/hmg/ddv463
- Hresko, M. T., Talwalkar, V., & Schwend, R. (2016). Early Detection of Idiopathic Scoliosis in Adolescents. *J Bone Joint Surg Am*, 98(16), e67. doi:10.2106/jbjs.16.00224
- Kou, I., Takahashi, Y., Johnson, T. A., Takahashi, A., Guo, L., Dai, J., . . . Ikegawa, S. (2013). Genetic variants in GPR126 are associated with adolescent idiopathic scoliosis. *Nat Genet*, 45(6),

Negrini, S., Donzelli, S., Aulisa, A. G., Czaprowski, D., Schreiber, S., de Mauroy, J. C., . . . Zaina, F. (2018). 2016 SOSORT guidelines: orthopaedic and rehabilitation treatment of idiopathic scoliosis during growth. *Scoliosis Spinal Disord*, 13, 3. doi:10.1186/s13013-017-0145-8

Noshchenko, A., Hoffecker, L., Lindley, E. M., Burger, E. L., Cain, C. M., Patel, V. V., & Bradford, A. P. (2015). Predictors of spine deformity progression in adolescent idiopathic scoliosis: A systematic review with meta-analysis. *World J Orthop*, 6(7), 537-558. doi:10.5312/wjo.v6.i7.537

Ogura, Y., Kou, I., Miura, S., Takahashi, A., Xu, L., Takeda, K., . . . Ikegawa, S. (2015). A Functional SNP in BNC2 Is Associated with Adolescent Idiopathic Scoliosis. *Am J Hum Genet*, 97(2), 337-342. doi:10.1016/j.ajhg.2015.06.012

Ogura, Y., Takahashi, Y., Kou, I., Nakajima, M., Kono, K., Kawakami, N., . . . Ikegawa, S. (2013). A replication study for association of 53 single nucleotide polymorphisms in a scoliosis prognostic test with progression of adolescent idiopathic scoliosis in Japanese. *Spine (Phila Pa 1976)*, 38(16), 1375-1379. doi:10.1097/BRS.0b013e3182947d21

Roye, B. D., Wright, M. L., Matsumoto, H., Yorgova, P., McCalla, D., Hyman, J. E., . . . Vitale, M. G. (2015). An Independent Evaluation of the Validity of a DNA-Based Prognostic Test for Adolescent Idiopathic Scoliosis. *J Bone Joint Surg Am*, 97(24), 1994-1998. doi:10.2106/jbjs.o.00217

Roye, B. D., Wright, M. L., Williams, B. A., Matsumoto, H., Corona, J., Hyman, J. E., . . . Vitale, M. G. (2012). Does ScolioScore provide more information than traditional clinical estimates of curve progression? *Spine (Phila Pa 1976)*, 37(25), 2099-2103. doi:10.1097/BRS.0b013e31825eb605

Scherl, S. (2020, 2/26/21). Adolescent idiopathic scoliosis: Clinical features, evaluation, and diagnosis - UpToDate. UpToDate. Retrieved from <https://www.uptodate.com/contents/adolescent-idiopathic-scoliosis-clinical-features-evaluation-and-diagnosis>

Simony, A., Carreon, L. Y., Hjmark, K., Kyvik, K. O., & Andersen, M. O. (2016). Concordance Rates of Adolescent Idiopathic Scoliosis in a Danish Twin Population. *Spine (Phila Pa 1976)*, 41(19), 1503-1507. doi:10.1097/brs.0000000000001681

Takahashi, Y., Kou, I., Takahashi, A., Johnson, T. A., Kono, K., Kawakami, N., . . . Ikegawa, S. (2011). A genome-wide association study identifies common variants near LBX1 associated with adolescent idiopathic scoliosis. *Nat Genet*, 43(12), 1237-1240. doi:10.1038/ng.974

Tang, Q. L., Julien, C., Eveleigh, R., Bourque, G., Franco, A., Labelle, H., . . . Moreau, A. (2015). A replication study for association of 53 single nucleotide polymorphisms in ScolioScore test with adolescent idiopathic scoliosis in French-Canadian population. *Spine (Phila Pa 1976)*, 40(8), 537-543. doi:10.1097/brs.0000000000000807

UKNSC. (2016). The UK NSC recommendation on Adolescent Idiopathic Scoliosis screening. Retrieved from <https://legacyscreening.phe.org.uk/scoliosis>

VSI. (2020). ADOLESCENT IDIOPATHIC SCOLIOSIS & GENETICS. Retrieved from <https://www.spinemd.com/treatments/scoliosis-genetic-testing>

Ward, K., Ogilvie, J. W., Singleton, M. V., Chettier, R., Engler, G., & Nelson, L. M. (2010).

Validation of DNA-based prognostic testing to predict spinal curve progression in adolescent idiopathic scoliosis. Spine (Phila Pa 1976), 35(25), E1455-1464.
doi:10.1097/BRS.0b013e3181ed2de1

Policy Update History:

5/1/2022	New policy
----------	------------