**Letter of Medical Necessity for Stickler Syndrome Panel**

**Patient Information**

**Date:**

**Patient Name:**

**Patient DOB:**

**Insurance Company Name, Address, City, State:**

**Policy Number:**

**Group Number:**

**ICD10 Codes:**

**Test Information**

**Test Name:** Stickler Syndrome Panel

**CPT Codes:** 81479x2

**Laboratory:**

GeneDx, Inc.

(NPI#1487632998 / TAXID#205446298 / CLIA#21D0969951)

207 Perry Parkway

Gaithersburg, MD 20877

Telephone: (301) 519-2100

Fax: (201) 421-2010

This letter is in regards to my patient, [FIRST NAME LAST NAME], to request full coverage for the Stickler Syndrome Panel to be performed by GeneDx. It is my professional determination that testing is medically necessary and will have a direct impact on this patient’s treatment and management.

**Patient Clinical and Family History**

This testing is requested due to this patient’s personal medical history, which includes the following clinical findings:

* Add Phenotype
* Add Phenotype
* Add Phenotype

The patient’s family history is negative for related conditions / unknown / remarkable for the following related clinical features:

The patient has previously had the following uninformative genetic and other testing:

* Add test
* Add test
* Add test

**Clinical Evidence and Guidelines for Testing**

The Stickler Syndrome Panel includes germline analysis of genes causing Stickler syndrome. Panel testing includes both sequencing and deletion/duplication analysis of multiple genes simultaneously.

Stickler syndrome is a heritable disorder of connective tissue characterized by ocular, auditory, craniofacial, and musculoskeletal manifestations. Ocular features include high myopia, congenital vitreous anomalies, cataracts, and retinal detachment.1,2 Hearing impairment of variable severity is present in 40% of individuals with Stickler syndrome.3 Mid-facial hypoplasia, micrognathia, and cleft palate may be present, and a diagnosis of Stickler syndrome is established in approximately 10-20% of individuals with Robin sequence.4,5 Skeletal involvement may manifest as early-onset osteoarthritis, relative short stature, joint hypermobility, and scoliosis/kyphosis, and radiographic features include mild spondyloepiphyseal dysplasia and platyspondyly.6 Variable expressivity is observed both within and between families, though the ocular phenotype tends to be consistent within families.3,7 In addition, both ocular-only and non-ocular forms of Stickler syndrome are described.2,6,8

Stickler syndrome is caused by pathogenic variants in genes encoding components of collagens.6

Overlapping features and variable expressivity pose a challenge to clinical diagnosis.1,6 When clinical features are subtle or non-specific, which is common in children and younger adults, genetic testing aids in diagnosis, management and establishing recurrence risk for family members. For example, genetic testing can be helpful in infants with cleft palate or Robin sequence and characteristic facial features who would not yet exhibit other clinical features that onset later in childhood or in adulthood so would not meet clinical diagnostic criteria.6

**Patient Clinical Utility and Medical Management Implications**

Genetic testing to confirm the diagnosis of Stickler syndrome can provide essential information about prognosis and can assist with decisions about treatment and management. For example, individuals with Stickler syndrome should be advised of the symptoms of retinal detachment and avoid activities such as contact sports that may increase the risk for traumatic retinal detachment.6 Individuals with Stickler syndrome are at increased risk for mitral valve prolapse and should be screened for symptoms with referral for an echocardiogram if they are noted to have suggestive symptoms.6 Additionally, children with pathogenic variants in genes encoding type IX collagen may have severe congenital sensorineural hearing impairment and often develop visual impairment due to significant myopia.9 Early confirmation of a diagnosis of Stickler syndrome due to a type IX collagen defect can help identify children who are at-risk for dual sensory impairment, providing important information for early therapies and education.9

Specifically for this patient, the results of this test will also {ADD ADDITIONAL INFORMATION}

**Summary**

The Stickler Syndrome Panel at GeneDx is a highly sensitive and cost-effective genetic test. I am requesting coverage for this medically necessary test in order to establish appropriate medical management for this patient. Without testing, treatment would be suboptimal, subjecting this patient to increased morbidity and potentially early mortality.

Thank you for your review and consideration. If you have questions, or if I can be of further assistance, please do not hesitate to call me at (XXX) XXX-XXXX.

Sincerely,

Signature

Ordering Provider’s Name

References:

1. Rose et al. (2005) Stickler syndrome: clinical characteristics and diagnostic criteria. Am. J. Med. Genet. A 138A (3):199-207 (PMID: 16152640)
2. Snead et al. (2011) Stickler syndrome, ocular-only variants and a key diagnostic role for the ophthalmologist. Eye (Lond). 25(11):1389-1400 (PMID 21921955)
3. Snead & Yates. (1999) Clinical and Molecular genetics of Stickler syndrome. J. Med. Genet. 36:353-359. (PMID 10353778)
4. Evans et al. (2006) Robin sequence: a retrospective review of 115 patients. Int. J. Pediatr. Otorhinolaryngol. 70(6):973-80 (PMID 16443284)
5. Gomez-Ospina & Bernstein (2016) Clinical, cytogenetic, and molecular outcomes in a series of 66 patients with Pierre Robin sequence and literature review: 22q11.2 deletion is less common than other chromosomal anomalies. Am. J. Med. Genet. A 170A(4):870-80 (PMID 26756138)
6. Robin et al. Stickler Syndrome. 2000 Jun 9 [Updated 2017 Mar 16]. In: Pagon RA, Adam MP, Ardinger HH, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2015.
7. Richards et al. (2010) Stickler syndrome and the vitreous phenotype: mutations in COL2A1 and COL11A1. Hum. Mutat. 31(6):E1461-71. (PMID 20513134)
8. Acke et al. (2014) Novel pathogenic COL11A1/COL11A2 variants in Stickler syndrome detected by targeted NGS and exome sequencing. Mol. Genet. Metab. 113 (3):230-5 (PMID: 25240749)
9. Nixon et al. (2019) Homozygous Type IX collagen variants (COL9A1, COL9A2, and COL9A3) causing recessive Stickler syndrome-Expanding the phenotype. Am. J. Med. Genet. A 179 (8):1498-1506 (PMID: 31090205)