

Contractor Name

Wisconsin Physicians Service (WPS)

Contractor Number

00951, 00952, 00953, 00954
05101, 05201, 05301, 05401,
05102, 05202, 05302, 05402, 52280

Contractor Type

Carrier - B
MAC - A B
Intermediary - A

LCD Database ID Number**LCD Version Number****LCD Title**

Cytogenetic Studies

Contractor's Determination Number

PATH-027

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CMS National Coverage Policy

Title XVIII of the Social Security Act section 1862 (a)(1)(A). This section allows coverage and payment of those services that are considered to be medically reasonable and necessary.

Title XVIII of the Social Security Act section 1862 (a)(7). This section excludes routine physical examinations and services

Title XVIII of the Social Security Act section 1833 (e). This section prohibits Medicare payment for any claim which lacks the necessary information to process the claim.

Primary Geographic Jurisdiction**Legacy A:**

Intermediary: Alaska, Alabama, Arizona, Arkansas, California - Entire State, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Iowa, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Maine, Michigan, Minnesota, Missouri - Entire State, Mississippi, Montana, North Carolina, North Dakota, Nebraska, New Hampshire, New Jersey, New Mexico, Nevada, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Vermont, Washington, Wisconsin, West Virginia, Wyoming, American Samoa, Guam, Northern Mariana Islands, U.S. Virgin Islands

Carrier: Wisconsin, Illinois, Michigan, Minnesota

MAC AB: Iowa, Missouri, Nebraska, Kansas

Oversight Region

Region I

Region V

Region VII

Original Determination Effective Date

Revision Effective Date

Indications and Limitations of Coverage and/or Medical Necessity

Discussion:

Cytogenetics is the study of chromosomes by light or fluorescent microscopy. Cytogenetic testing is used to study an individual's chromosome makeup. The term karyotyping refers to the arrangement of nuclear chromosomes in order from the largest to the smallest to analyze their number and structure. Variations in chromosome number or structure can produce a variety of clinical findings, including abnormalities of growth and intellect, congenital anomalies and, in the case of sex chromosome abnormalities ambiguous gender. Cytogenetic testing determines the number of chromosomes, defines the chromosome and examines the individual chromosomes for structural abnormalities such as deletions, duplications and translocations. Within the last 15 years cytogeneticists have incorporated molecular genetic techniques to identify structural chromosome abnormalities that are not visible using standard microscopy. These techniques include Fluorescence in situ hybridization (FISH), telomere-specific probes, spectral karyotyping, and comparative genomic hybridization. These techniques are used, when clinically indicated, to improve the accuracy and resolution of the standard karyotype. A normal karyotype consists of 22 pairs of autosomal chromosomes (numbered 1-22), and a pair of sex chromosomes: XY for the male and XX for the female. Karyotypes are reported using the International System for Cytogenetic Nomenclature which was last revised in 1995 (ICSN 1995).

Specimens for cytogenetic analysis can be obtained from a variety of tissues that yield cells that divide in culture including: peripheral blood, (lymphocytes; amniotic fluid (amniocytes); trophoblastic cells, chorionic villi; bone marrow; solid tumors, and cultured fibroblasts, usually obtained by skin biopsy. The newer molecular cytogenetic techniques can be used even in non-dividing cells such as buccal cells obtained non-invasively from a cheek swab. Enough cells must be examined so that the chance of missing a cytogenetically distinct cell line (called mosaicism) is statistically low. For most clinical indications, 20 mitoses are examined and counted under direct microscopic visualization, and two are photographed or digitalized and karyotypes are prepared. Observation of aberrations usually prompts more extended scrutiny, and in many cases, further analysis of the original culture.

Indications

Cytogenetic studies may be undertaken to rule out a constitutional or acquired chromosomal abnormality. For most laboratories cytogenetic analyses now include standard G-banded chromosome analyses and/or molecular cytogenetic studies utilizing the method of fluorescence-in-situ-hybridization.

Constitutional chromosome abnormalities refer to those present at birth. Constitutional studies may be undertaken prenatally or postnatally:

Prenatal cytogenetic studies are indicated:

1. to rule out the presence of an abnormality in the fetus. Reasons for referral may include advanced maternal age (associated with an increased risk for trisomy), abnormalities observed on ultrasound, family

history of a chromosome abnormality that increases risk for the current pregnancy). Cytogenetic studies are also performed on products of conception, to determine whether a chromosome abnormality was responsible for a fetal loss.

Postnatal cytogenetic studies are indicated:

1. to rule out a constitutional chromosome abnormality (present at birth) that may be associated with congenital anomalies, developmental delays, and/or mental retardation, and/or problems in sexual maturation or reproduction. The chromosome abnormalities involved in these disorders may be of number (gain or loss of a chromosome) or structure (e.g. deletions, duplications, derivative chromosomes resulting in both partial losses and gains of chromosomal material, inversions). Recently, with the advent of high resolution cytogenetics and supplemental studies by fluorescence-in-situ-hybridization (FISH) it has been possible to identify very subtle abnormalities that may be associated with neurologic and developmental issues (e.g. autism) rather than the multiple congenital anomalies. Many of these abnormalities represent so-called “microduplications or microdeletions”. Specific FISH probes that can evaluate the presence or loss or duplication of specific gene regions involved in these duplications and deletions are now a part of routine cytogenetic practice (e.g. probes for Prader-Willi syndrome, DiGeorge syndrome, Williams syndrome.)
2. to rule out the presence of a balanced chromosomal rearrangement (e.g. translocation) that puts the individual at risk for having a child with multiple congenital anomalies or for risk of recurrent miscarriage.
3. to rule out the presence of a chromosome instability syndrome that predisposes to development of malignancy (e.g. Fanconi anemia, Bloom syndrome, ataxia telangiectasia)

Acquired chromosome abnormalities refer to those that are typically acquired after birth, by a subpopulation of cells that is involved in a premalignant or malignant condition.

1. It is now recognized that the majority of hematologic malignancies are associated with clonal chromosomal abnormalities. Identifying the specific chromosome abnormality is now required for differential diagnosis of many of the lymphoid and myeloid leukemias and myelodysplastic syndromes. Additionally, as many of these chromosome abnormalities have been shown to have independent prognostic significance, identification of these abnormalities has become important for determining therapeutic regimens. For certain abnormalities (e.g. the Philadelphia chromosome and the 15;17 translocation) there are specific therapies targeted to the specific abnormalities.
2. Chromosome abnormalities for diagnosis and therapy decisions have also been identified in solid tumors including lymphomas, the small round blue cell tumors of childhood, and adult solid tumors such as breast and prostate.
As with the constitutional studies, FISH studies targeted at identifying the specific gene rearrangement associated with the recurring chromosomal abnormality have become routine (e.g. the BCR/ABL fusion generated by the Philadelphia chromosome in CML and acute lymphoblastic leukemia, the PML/RARA fusion of the 15;17 translocation in APL)

Coding Information

Bill Type Codes

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the article does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the article should be assumed to apply equally to all claims.

11x	Hospital-inpatient (including Part A)
12x	Hospital-inpatient or home health visits (Part B only)

13x	Hospital-outpatient (HHA-A also) (under OPPS 13X must be used for ASC claims submitted for OPPS payment -- eff. 7/00)
14x	Non-Patient Laboratory Specimens
71x	Clinic-rural health
73x	Clinic-independent provider based FQHC (eff 10/91)
85x	Special facility or ASC surgery-rural primary care hospital (eff 10/94)

Revenue Codes

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory; unless specified in the article services reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the article should be assumed to apply equally to all Revenue Codes.

Revenue codes only apply to providers who bill these services to the fiscal intermediary or Part A MAC. Revenue codes do not apply to physicians, other professionals and suppliers who bill these services to the carrier or Part B MAC.

Please note that not all revenue codes apply to every type of bill code. Providers are encouraged to refer to the FISS revenue code file for allowable bill types. Similarly, not all revenue codes apply to each CPT/HCPCS code. Providers are encouraged to refer to the FISS HCPCS file for allowable revenue codes.

All revenue codes billed on the inpatient claim for the dates of service in question may be subject to review.

Revenue codes 096X, 097X and 098X are to be used only by Critical Access Hospitals (CAHs) choosing the optional payment method (also called Option 2 or Method 2) and only for services performed by physicians or practitioners who have reassigned their billing rights. When a CAH has selected the optional payment method, physicians or other practitioners providing professional services at the CAH may elect to bill their carrier or Part B MAC or assign their billing rights to the CAH. When professional services are reassigned to the CAH, the CAH must bill the FI or Part A MAC using revenue codes 096X, 097X or 098X.

0300	Laboratory-general classification
0309	Laboratory-other laboratory
0310	Laboratory pathological-general classification
0311	Laboratory pathological-cytology
0319	Laboratory pathological-other
0971	Professional fees-laboratory

CPT/HCPCS Codes

88230	Tissue culture for non-neoplastic Disorders; lymphocyte
88233	Tissue culture for non-neoplastic Disorders; skin or other solid tissue Biopsy
88235	Tissue culture for non-neoplastic Disorders; amniotic fluid or chorionic Villus cells
88237	Tissue culture for neoplastic disorders; bone marrow, blood cells
88239	Tissue culture for neoplastic disorders; solid tumor
88240	Cryopreservation, freezing and storage Of cells, each cell line

88241	Thawing and expansion of frozen cells, Each aliquot
88245	chromosome analysis for breakage Syndromes; baseline sister chromatid exchange (sce), 20-25 cells
88248	Chromosome analysis for breakage Syndromes; baseline breakage, score 50-100 cells, count 20 cells, 2 karyotypes (eg, for ataxia telangiectasia, fanconi anemia, fragile x)
88249	Chromosome analysis for breakage Syndromes; score 100 cells, clastogen Stress (eg, diepoxybutane, mitomycin c, Ionizing radiation, uv radiation)
88261	Chromosome analysis; count 5 cells, 1 Karyotype, with banding
88262	Chromosome analysis; count 15-20 cells, 2 Karyotypes, with banding
88263	Chromosome analysis; count 45 cells for Mosaicism, 2 karyotypes, with banding
88264	Chromosome analysis; analyze 20-25 cells
88267	Chromosome analysis, amniotic fluid or Chorionic villus, count 15 cells, 1 Karyotype, with banding
88269	Chromosome analysis, in situ for Amniotic fluid cells, count cells from 6-12 colonies, 1 karyotype, with banding
88271	Molecular cytogenetics; dna probe, Each (eg, fish)
88272	Molecular cytogenetics; chromosomal In situ hybridization, analyze 3-5 cells (eg, for derivatives and markers)
88273	Molecular cytogenetics; chromosomal In situ hybridization, analyze 10-30 cells (eg, for microdeletions)
88274	Molecular cytogenetics; interphase in situ hybridization, analyze 25-99 cells
88275	Molecular cytogenetics; interphase in Situ hybridization, analyze 100-300 cells
88280	Chromosome analysis; additional karyotypes, each study
88283	Chromosome analysis; additional specialized banding technique (eg, nor, c banding)
88285	Chromosome analysis; additional cells counted, each study
88289	Chromosome analysis; additional high Resolution study
88291	Cytogenetics and molecular cytogenetics, interpretation and report
88299	Unlisted cytogenetic study

Does the CPT 30% Rule Apply

No

ICD-9 Codes that Support Medical Necessity

Note: ICD-9 codes must be coded to the highest level of specificity.

Constitutional Cytogenetic Studies

88235, 88262, 88267, 88269, 88283, 88289

228.1	Lymphangioma any site
256.39	Other ovarian failure
257.8	Other testicular dysfunction
259.0	Delay in sexual development and puberty not mentioned elsewhere
279.11	Digeorge's syndrome
299.00 - 299.11	Autistic disorder, current or active state - childhood disintegrative disorder, residual state
317 - 319	Mild mental retardation - Unspecified mental retardation
606.0	Azoospermia

606.1	Oligospermia
611.1	Hypertrophy of breast
628.9	Infertility female of unspecified origin
630 - 631	hydatidiform mole - other abnormal product of conception
634.00 - 634.92	92 spontaneous abortion unspecified complicated by genital tract and pelvic infection – spontaneous; Abortion complete without complication
653.70	Other fetal abnormality causing disproportion unspecified as to episode of care
653.71	Other fetal abnormality causing disproportion delivered
653.73	Other fetal abnormality causing disproportion antepartum
655.10 - 655.13	chromosomal abnormality in fetus affecting management of mother unspecified as to episode of care in pregnancy – chromosomal abnormality in fetus affecting management of mother antepartum
655.20 - 655.23	Hereditary disease in family possibly affecting fetus affecting management of mother unspecified as to episode of care in pregnancy - hereditary disease in family possibly affecting fetus affecting management of mother antepartum condition or complication
656.40	Intrauterine death affecting management of mother unspecified as to episode of care
656.41	Intrauterine death affecting management of mother delivered
656.43	Intrauterine death affecting management of mother antepartum
656.50	Poor fetal growth affecting management of mother unspecified as to episode of care
656.51	Poor fetal growth affecting management of mother delivered
656.53	Poor fetal growth affecting management of mother antepartum condition or complication
656.60	Excessive fetal growth affecting management of mother unspecified as to episode of care
656.61	Excessive fetal growth affecting management of mother delivered
656.63	Excessive fetal growth affecting management of mother antepartum
659.53 - 659.63	Elderly primigravida antepartum - other advanced maternal age antepartum condition or complication
740.0 - 759.9	Anencephalus - congenital anomaly Unspecified
764.90 - 764.99	Fetal growth retardation unspecified weight - fetal growth retardation 2500 grams and over
779.9	Unspecified condition originating in the perinatal period
783.43	Short stature
792.3	Nonspecific abnormal findings in amniotic fluid
796.5	Abnormal finding on antenatal screening
V19.5	Family history of congenital anomalies
V23.2	Supervision of high-risk pregnancy with history of abortion
V23.81 - V23.82	Supervision of high-risk pregnancy with elderly primigravida - supervision of high-risk pregnancy with elderly multigravida
V28.0 - V28.4	Antenatal screening for chromosomal anomalies by amniocentesis - antenatal screening for fetal growth retardation using ultrasonics

Syndromes that predispose to malignancy

88230, 88245, 88248, 88249, 88283

284.01	Constitutional red blood cell aplasia
284.09	Other constitutional aplastic anemia
334.8	Other spinocerebellar diseases
757.39	Other specified congenital anomalies of skin

759.89	Other specified congenital anomalies
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Acquired (cancer) chromosome studies

88237, 88239, 88262, 88271, 88272, 88273, 88274, 88275, 88283

143.9	Malignant neoplasm of gum unspecified
152.1 - 152.8	Malignant neoplasm of jejunum - malignant neoplasm of other specified sites of small intestine
158.0	Malignant neoplasm of retroperitoneum
162.0 - 165.9	Malignant neoplasm of trachea - malignant neoplasm of ill-defined sites within the respiratory system
170.0 - 170.9	Malignant neoplasm of bones of skull and face except mandible - malignant Neoplasm of bone and articular cartilage site unspecified
171.0 - 171.9	Malignant neoplasm of connective and other soft tissue of head face and neck - malignant neoplasm of connective and other soft tissue site unspecified
173.9	Other malignant neoplasm of skin site. unspecified
174.0 - 174.9	Malignant neoplasm of nipple and areola of female breast - malignant neoplasm of Breast (female) unspecified site
175.0 - 175.9	Malignant neoplasm of nipple and areola of male breast - malignant neoplasm of other and unspecified sites of male breast
188.0 - 188.9	Malignant neoplasm of trigone of urinary bladder - malignant neoplasm of bladder part unspecified
189.0 - 189.9	Malignant neoplasm of kidney except pelvis - malignant neoplasm of urinary organ site unspecified
190.1	Malignant neoplasm of orbit
191.0 - 191.9	Malignant neoplasm of cerebrum except lobes and ventricles - malignant neoplasm of brain unspecified site
192.3	Malignant neoplasm of spinal meninges
197.0 - 197.8	Secondary malignant neoplasm of lung - secondary malignant neoplasm of other digestive organs and spleen
198.0 - 198.89	Secondary malignant neoplasm of kidney - secondary malignant neoplasm of other specified sites
200.00 - 202.98	Reticulosarcoma unspecified site – other and unspecified malignant neoplasms of lymphoid and histiocytic tissue involving lymph nodes of multiple sites
203.00 - 203.02	Multiple myeloma, without mention of having achieved remission - multiple myeloma, in relapse
203.10 - 203.12	Plasma cell leukemia, without mention of having achieved remission - plasma cell leukemia, in relapse
203.80 - 203.82	Other immunoproliferative neoplasms, without mention of having achieved remission - other immunoproliferative neoplasms, in relapse
204.00 - 204.01	Acute lymphoid leukemia, without mention of having achieved remission - lymphoid leukemia acute in remission
204.10 - 204.12	Chronic lymphoid leukemia, without mention of having achieved remission - chronic lymphoid leukemia, in relapse
204.90 - 204.92	Unspecified lymphoid leukemia, without mention of having achieved remission - unspecified lymphoid leukemia, in relapse
205.00 - 205.92	Acute myeloid leukemia, without mention of having achieved remission - unspecified Myeloid leukemia, in relapse
206.00 - 206.92	Acute monocytic leukemia, without mention of having achieved remission -

	unspecified monocytic leukemia, in relapse
207.00 - 207.82	Acute erythremia and erythroleukemia, without mention of having achieved remission - other specified leukemia, in relapse
208.00 - 208.02	Acute leukemia of unspecified cell type, without mention of having achieved remission - acute leukemia of unspecified cell type, in relapse
208.10 - 208.12	Chronic leukemia of unspecified cell type, without mention of having achieved remission - chronic leukemia of unspecified cell type, in relapse
208.20 - 208.22	Subacute leukemia of unspecified cell type, without mention of having achieved remission - subacute leukemia of unspecified cell type, in relapse
208.80 - 208.82	Other leukemia of unspecified cell type, without mention of having achieved remission - other leukemia of unspecified
208.90 - 208.92	Unspecified leukemia, without mention of having achieved remission - unspecified leukemia, in relapse
223.3	Benign neoplasm of bladder
230.0	Carcinoma in situ of lip oral cavity and pharynx
231.0	Carcinoma in situ of larynx
232.9	Carcinoma in situ of skin site unspecified
233.0	Carcinoma in situ of breast
233.30 - 233.39	Carcinoma in situ, unspecified female genital organ - carcinoma in situ, other female genital organ
233.7	Carcinoma in situ of bladder
233.9	Carcinoma in situ of other and unspecified urinary organs
234.0	Carcinoma in situ of eye
236.7	Neoplasm of uncertain behavior of bladder
238.4	Polycythemia vera
238.5	Neoplasm of uncertain behavior of histiocytic and mast cells
238.6	Neoplasm of uncertain behavior of plasma cells
238.71 - 238.79	Essential thrombocythemia – other lymphatic and hematopoietic tissues (myelodysplasia etc.)
239.2	Neoplasm of unspecified nature of bone, soft tissue and skin
239.3	Neoplasm of unspecified nature of breast
273.3	Macroglobulinemia
284.01 - 284.9	Constitutional red blood cell aplasia - aplastic anemia unspecified
288.09	Other neutropenia
288.59	Other decreased white blood cell count
288.69	Other elevated white blood cell count
289.89	Other specified diseases of blood and blood-forming organs

Diagnoses that Support Medical Necessity

There are no specific codes for the following syndromes. Use code 758.5, other conditions due to autosomal anomalies, to indicate these conditions.

Microdeletion and other chromosomal syndromes:

- Angelman syndrome (associated with deletion of 15q11.2).
- Williams syndrome (associated with deletion of 7q11.3).
- Smith Magenis Syndrome: (deletion of 17p11.2): Mental retardation, dysmorphism, severe
- Miller Dieker and isolated lissencephaly (deletion of 17p13)

For the microdeletion syndromes listed above, the clinical referral is typically to:

Rule out Prader Willi or Angelman, etc.

Solid tumors:

Cytogenetic studies may be useful in the following cancer types or to determine if a cancer fits into one of these types.. (Medicare does not use the M codes for billing purposes). See the list of icd-9 codes for solid tumors listed above to bill for these types of cancer.

M9260/3 Ewing sarcoma

M8910/3 Embryonal rhabdomyosarcoma

M8920/3 Alveolar rhabdomyosarcoma

M9040/3 Alveolar soft part sarcoma

M9500/3 Neuroblastoma

M9391/3 Ependymoma

M940/3 Glioblastoma

M9380/3 Glioma

M9380/3 Gliosarcoma

M9470/3 Medulloblastoma

M9040 Synovial sarcoma

The following are referred for Her2Neu

M8500/3 Ductal carcinoma

M8541/3 Ductal carcinoma with Paget's Disease

M8489/3 Collid/Mucinous carcinoma

M8500/2 Intraductal carcinoma

M8510/3 Lobular carcinoma

M8510/3 Medullary carcinoma

The following are for prostate related FISH:

M8120/2-3 Urothelial carcinoma

M8130/3 Transitional carcinoma

ICD-9 Codes that DO NOT Support Medical Necessity**Diagnoses that DO NOT Support Medical Necessity****Documentation Requirements**

Documentation supporting the medical necessity of this item, such as ICD-9 codes, must be submitted with each claim. Claims submitted without such evidence will be denied as being not medically necessary.

Medical record documentation maintained by the ordering/referring physician must indicate the medical necessity for performing the test. Additionally, a copy of the test results should be maintained in the medical records. This information is usually found in the history and physical, office/progress notes, and/or laboratory results.

If the provider of the service is other than the ordering/referring physician, that provider must maintain hard copy documentation of the test results and interpretation, along with copies of the ordering/referring physician's order for the studies. The physician must state the clinical indication/medical necessity for the study in his order for the test.

Utilization Guidelines

Genetic disorders and failure of sexual development involve chromosomal abnormalities that are stable over time, and, accordingly, payment for cytogenetic studies for these abnormalities will be allowed once per lifetime. This is in contrast to the malignancies, where repeat cytogenetic studies may be appropriate. However, if a new technique (eg, fluorescence in-situ hybridization) becomes available that was not available at the time of initial diagnosis, or if a supplemental study is able to be performed at a higher

level of resolution and this increase the chances of detecting a chromosome abnormality, the follow-up study will be considered.

Sources of Information and Basis for Decision

General reference for Cytogenetic Studies: 2004 Standards and Guidelines for Clinical Genetics Laboratories E: Clinical Cytogenetics, American College of Medical Genetics.

For the Acquired Chromosome Studies :

1. Heim S and Mitelman F, 1995, Cancer Cytogenetics, John Wiley and Sons, New York, NY.
2. Jaffe ES et al ,2001, World Health Organization Classification of Tumours: Tumours of Haematopoietic and Lymphoid Tissues. Oxford University Press
3. <http://www.infobiogen.fr/services/chromcancer/>

For the Constitutional Chromosome Studies:

1. Jorde LB, Carey JC, Bamshad MJ, White RI. 1999, Medical Genetics, NY.
2. McKinlay Gardner RJ and Sutherland GR, 2004, Chromosome Abnormalities and Genetic Counseling, Oxford, NY

Advisory Committee Meeting Notes

Meeting Date:

Wisconsin:	09/25/2009
Illinois:	09/16/2009
Michigan:	09/09/2009
Minnesota:	09/24/2009
Iowa, Kansas, Missouri, Nebraska	10/08/2009
Jurisdictional Open Meeting	08/19/2009

Start Date of Comment Period

10/08/2009

End Date of Comment Period

11/23/2009

Start Date of Notice Period

(Published)

Revision History Number/Explanation

Last Reviewed On

Related Documents

See coding guidelines for [Cytogenetic Studies](#).

Does this LCD contain a "Least Costly Alternative" Provision?

No

Local Coverage Determination Coding Guidelines

Contractor Name

Wisconsin Physicians Service (WPS)

Contractor Number

00951, 00952, 00953, 00954
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05102, 05202, 05392, 05302, 05402

LCD Title

Cytogenetic Studies

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Medicare Regulations

CMS National Coverage Policy

Title XVIII of the Social Security Act section 1862 (a)(1)(A). This section allows coverage and payment of those services that are considered to be medically reasonable and necessary.

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Medicare National Coverage Determination Manual 190.3

(Formerly CIM 50-29)

Publication Number : 100-3; **Manual Section Number:** 190.3; **Version Number :** 1

Effective Date of this Version: 7/16/1998

Benefit Category: Diagnostic Tests (other)

Note: This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

Item/Service Description

The term cytogenetic studies is used to describe the microscopic examination of the physical appearance of human chromosomes.

Indications and Limitations of Coverage

Medicare covers these tests when they are reasonable and necessary for the diagnosis or treatment of the

following conditions:

Genetic disorders (e.g., mongolism) in a fetus; (See the Medicare Benefit Policy Chapter 15, "Covered Medical and Other Health Services," §20.1)

Failure of sexual development;

Chronic myelogenous leukemia;

Acute leukemias lymphoid (FAB L1-L3), myeloid (FAB M0-M7), and unclassified; or myelodysplasia

Transmittal Number: 105

Revision History

05/1998 - Added two new covered uses for these studies: acute leukemia (lymphoid, myeloid, and unclassified) and myelodysplasia. Effective date 07/16/1998. (TN 105)

Coding Guidelines:

- A. Screening is not a covered benefit by Medicare. If the test being done is for screening purposes, use code V72.6. (This should only be used when a denial is needed for secondary insurance.) patients should be notified that screening is a non-covered service.

- B. CPT codes: Vary according to specific purpose.
Examples of codes that would be billed to together with the FISH procedure
FISH 3-5 metaphase cells = 88272, 88271*
FISH 10-30 metaphase cells = 88273, 88271*
FISH 25-99 interphase cells = 88274, 88271*
FISH 100-300 interphase cells = 88275, 88271*
* for each probe - so, a dual-probe assay would be 88271 X 2

- C. Claims Submission:
 - 1. List the appropriate CPT code.
 - 2. List the most specific ICD-9 code to indicate the reason for testing.