This is a hierarchical decimal classification of information related to various types of carcinogenesis (Chemical, viral, hormonal, radiation), cancer demography, and selected descriptive and "in vitro" aspects of cancer pathology. It is a working draft of categories taken from an extensive classification of many fields of biomedical information. Because the classification identifies very small areas of cancer information, it can be used for precise matching of cancer researchers with useful documents or data in information systems, and for detailed analysis of large cancer research programs. (Related Documents are: ED 025 270 and LI 004 018 and LI 004 020.) (Author)
CANCER ETIOLOGY AND SELECTED ASPECTS OF CANCER PATHOLOGY:
A DECIMAL CLASSIFICATION

(CATEGORIES 51.4 AND 51.5)

ABSTRACT

This is a hierarchical decimal classification of information related to various types of carcinogenesis (chemical, viral, hormonal, radiation), cancer demography, and selected descriptive and in vitro aspects of cancer pathology. It is a working draft of categories taken from an extensive classification of many fields of biomedical information.

Because the classification identifies very small areas of cancer information, it can be used for precise matching of cancer researchers with useful documents or data in information systems, and for detailed analysis of large cancer research programs.

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April 24, 1972

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The use of this classification in an automated information system has been described in the following reference:


This paper describes the use of these classifications for precise matching of 103 cancer research scientists against a data base of 1,396 articles published in 12 leading cancer research journals.

The development and publication of this classification would have been very difficult without the conscientious effort of Mrs. Kathleen McManus who has worked with these categories for the past six years.

Thanks are also due to Miss Patricia Gorman and Miss Cynthia Friedman who keypunched cards from very rough drafts of the classification, and to Miss Sylvia Daves for help in some of the final stages of computer programming and printing.

John H. Schneider
April 24, 1972

Most of the categories contained in this classification were developed in the early 60's. Little time has been available for modifying the classification since 1968. As a result, fast moving fields (such as cancer virology) are now considerably out of date in that they do not contain categories for the most recent findings and developments, such as specific anticancer agents, viruses, carcinogenic agents, etc.
Hierarchical classifications can be used for two different but related purposes:

1) In Information Systems:

   Small areas of information can be precisely identified by categories in a detailed hierarchical decimal classification. These categories can be used to:
   a) Index information in published documents,
   b) Index information needs of individual scientists, and
   c) Match scientists with indexed information and documents.

2) For Detailed Program Analysis:

   Hierarchical decimal classifications can be used to organize the scientific content and substance of research programs. This is accomplished by using categories from the classification to group related research projects together into:
   a) Small research units consisting of several related projects,
   b) Research areas consisting of several research units, and
   c) Large program areas consisting of several research areas.

   This clustering and "treeing" of research activities is an essential component of program analysis and program management activities. In addition, the hierarchical structure permits analysis at any desired level of detail -- ranging from broad summaries and overviews to individual research projects.
CURRENT STATUS OF THIS CLASSIFICATION

A preliminary version of the entire cancer classification was published in 1968.* At that time, it consisted of typewritten pages which were subsequently modified by handwritten insertions and changes.

Since that time, it has been converted to punched cards, and an automated system called AUTOKLS has been written in PL/I to convert the cards to magnetic tape records. These records can be updated by another AUTOKLS program and can be printed out in indented, hierarchical format for use by indexers.

Still other parts of the AUTOKLS system are used for keeping track of cross-references between categories, for linking terms in alphabetic indexes to specific categories in the classification, and for updating the alphabetic index entries.

As mentioned in the abstract, this published version is a PRELIMINARY, WORKING DRAFT at a very early stage after the difficult conversion from typed and handwritten pages to punched cards.

For these reasons, there are some gaps and omissions in subject coverage, some topics covered only in broad outline with insufficient detail, some cases where several categories deal with the same topic in almost the same way, occasional cross-references that do not refer to the correct category number, and probably some spelling and simple clerical errors that have not yet been noticed. In addition, some cross-references refer to categories in portions of the classification which are not yet published.

However, because THIS CLASSIFICATION IS CONSTANTLY EVOLVING AND DEVELOPING it will never be available in final, fixed form. Instead, it will be published periodically to show current status. (Computer printouts of the most up-to-date version for use by indexers can easily be prepared weekly or monthly.) Most of the problems mentioned in the last paragraph will be corrected in the course of continuing updating and revision.

51.4 CANCER ETIOLOGY (INCLUDING ALL TYPES OF CARCINOGENESIS AND DEMOGRAPHY).

This major category also includes studies of co-carcinogens, mechanism of carcinogen and co-carcinogen action, cancer biometry, and cancer epidemiology.

51.40 Etiology (including carcinogenesis and demography) of specific types of cancer in humans.

51.41 Etiology (including experimental carcinogenesis and biometrics) of specific types of cancer in animals.

51.42 CO-CARCINOGENS, including theoretical aspects and general information about co-carcinogens and stages in tumor development.

51.43 Carcinogenic effect of environmental agents and endogenous pathological conditions (non-microbial).

51.44 Carcinogenic action of RADIATION.

51.45 VIRUSES AND OTHER MICROBES AS CARCINOGENIC AGENTS: MECHANISM OF VIRAL CARCINOGENESIS.

51.46 CARCINOGENIC CHEMICALS: CHEMICAL CARCINOGENESIS.

51.47 Carcinogenesis related to HORMONES, endocrine glands and secondary sex tissues.

51.48 Carcinogenic action of other agents, including agents from plant and animal sources.

51.5 CANCER PATHOLOGY AND CYTOLOGY (mostly descriptive studies).

51.51 Characteristics of cancerous tissues in vitro: Tissue culture, chromosomes, sub-cellular studies, electron microscopy.

51.52 to 51.58 DESCRIPTIONS OF CANCER OF SPECIFIC ORGAN SYSTEMS IN HUMANS AND ANIMALS.

51.525 Leukemia, lymphoma, and related types of cancer.

51.53 Cancer of muscle tissues: myomas.

51.54 Cancer of the kidney, bladder, and associated ducts and tracts.

51.552 Lung cancer.

51.553 Liver cancer.

51.554 Gastrointestinal cancer.

51.555 Cancer of reproductive organs and tissues.

51.556 Cancer of the nervous tissue and brain: brain tumors.

51.557 Cancer of the sense organs.

51.582 Cancer of connective tissues.

51.583 Skin cancer.

51.584 Bone cancer.

51.59 Cancer of selected body structures.

(The complete list of all subdivisions included in the outline above begins on page 1 and consists of 2,223 individual categories.)
OUTLINE OF ALL MAJOR CATEGORIES FOR CANCER RESEARCH INFORMATION

51.1 Selected General Topics Related to Cancer Research
51.2 Clinical Aspects of Diagnosis and Treatment
51.3 Pre-Clinical Aspects of Diagnosis and Treatment
51.4 Cancer Epidemiology and Etiology, including all types of Carcinogenesis and Co-Carcinogenesis
51.5 Cancer Pathology; Related Physiology, Cytology, and Tissue Culture Studies
51.6 Biochemistry of Tumors and Tumor-Bearing Hosts
51.7 Host-Tumor Interactions
51.8 Cancer in Specific Types of Hosts
51.4 CARCINOGENESIS, CO-CARCINOGENESIS, CANCER ETIOLOGY, CANCER BIOMETRY, AND CANCER EPIDEMIOLOGY.

51.40 ETIOLOGY, CARCINOGENESIS, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY, AND RELATED STUDIES OF HUMAN CANCER.

51.400 GENERAL CANCER EPIDEMIOLOGY AND CANCER BIOMETRY (HUMANS).

INCIDENCE, FREQUENCY, AND OCCURRENCE OF CANCER.

SEE ALSO: 51.43212 FOR EPIDEMIOLOGICAL STUDIES RELATING CANCER INCIDENCE TO SPECIFIC OCCUPATIONS OR INDUSTRIAL ENVIRONMENTS OR INDUSTRIAL CHEMICALS.

SEE ALSO: 51.4412 FOR EPIDEMIOLOGICAL STUDIES OF CANCER INDUCTION BY RADIATION.

SEE ALSO: 51.45114 FOR EPIDEMIOLOGICAL ASPECTS OF VIRAL CARCINOGENESIS.

SEE ALSO: 51.2015 FOR END RESULTS STUDIES OF CANCER THERAPY.

SEE ALSO: 51.410 FOR SIMILAR STUDIES IN ANIMALS.

51.4001 GENERAL.

51.40011 OPEN.

51.40012 TEXTS, BOOKS AND REVIEW ARTICLES ON CANCER EPIDEMIOLOGY.

51.40013 CONFERENCES, SYMPOSIA, AND COURSES ON CANCER EPIDEMIOLOGY.

51.40014 METHODS OF CANCER EPIDEMIOLOGY AND SOURCES OF CANCER PATIENT DATA.

51.400141 GENERAL.

51.400142 CANCER SURVEYS IN GENERAL AND RELATED STATISTICAL METHODS.

51.400143 CANCER REGISTRIES.

51.400144 SOURCES OF INFORMATION ON CANCER INCIDENCE.

51.40014401 GENERAL.

51.40014402 DEATH CERTIFICATES.

51.40014403 DOCTORS' REPORTS.

51.40014404 HOSPITAL RECORDS.

51.4002 CANCER IN PATIENTS OF DIFFERENT AGES.

AGE-SPECIFIC INCIDENCE RATES.

51.40021 GENERAL.

51.40022 INCIDENCE OF CANCER IN CHILDREN (CHILDHOOD NEOPLASIA).

51.40023 INCIDENCE OF CANCER IN TEEN-AGERS AND ADULTS.

51.40024 INCIDENCE OF NEOPLASIA IN THE AGED. RELATION OF AGE TO CANCER INCIDENCE.

51.4003 OPEN.

51.4004 EPIDEMIOLOGIC STUDIES OF SELECTED RACIAL, ETHNIC, RELIGIOUS, AND SOCIAL GROUPS.

SEE ALSO: 51.4035 FOR CANCER INCIDENCE IN HIGHLY INBRED POPULATIONS.

SEE ALSO: 51.4006 FOR STUDIES IN SPECIFIC GEOGRAPHICAL AREAS.

51.400401 GENERAL.

51.400402 CANCER EPIDEMIOLOGY IN JEWS.

51.400403 CANCER EPIDEMIOLOGY IN NEGROES.

51.400454 STUDIES OF CATHOLIC ORDERS (NUNS, BROTHERS, PRIESTS).

51.4005 STUDIES ON IMMIGRANT POPULATIONS.

51.400501 GENERAL.

51.400502 IMMIGRANT POPULATIONS FROM EUROPE AND RUSSIA TO AMERICA: COMPARISON OF CANCER IN NORWEGIAN IMMIGRANTS WITH CANCER IN RELATIVES STILL IN NORWAY.

51.400503 IMMIGRANT POPULATIONS FROM JAPAN AND THE FAR EAST.

51.400504 OTHER IMMIGRANT POPULATIONS.

51.4006 INCIDENCE OF CANCER IN DIFFERENT GEOGRAPHICAL AREAS.

SEE ALSO: 51.4005 FOR IMMIGRANT STUDIES.

51.40061 GENERAL.

51.400611 SPATIAL-TEMPORAL AGGREGATION AND CLUSTERS OR "MICROEPIDEMIOLOGY" OF CANCER.

SEE ALSO: 51.4025235 FOR CLUSTERING IN LEUKEMIA.

51.400612 INTERNATIONAL DEATH RATES FROM CANCER AND RELATED STUDIES.

51.40062 CANCER INCIDENCE IN NORTH AMERICA.

51.400621 GENERAL.

51.400622 CANCER INCIDENCE IN ISLANDS NEAR NORTH AMERICA.

51.400622G GRE GREENLAND.

51.400622ICE ICELAND.

51.400623 CANADA.

51.400624 UNITED STATES AND ALASKA (ADD FIRST FOUR LETTERS OF STATE FOR INDIVIDUAL STATES AND ARRANGE IN ALPHABETICAL ORDER).

51.400624AK ALASKA AND ALEUTIAN ISLANDS.

51.400624CA CALIFORNIA.

51.400624CONN CONNECTICUT.
51.4062 HAWAII.
51.40625 MEXICO AND CENTRAL AMERICA. (ADD FIRST FOUR LETTERS OF COUNTRY NAME).
51.4063 CANCER INCIDENCE IN SOUTH AMERICA.
51.4063 BRAZ BRAZIL.
51.4063 COLU COLUMBIA.
51.4064 CANCER INCIDENCE IN EUROPE.
51.4064 FINL FINLAND.
51.4064 FRAN FRANCE.
51.4064 GERM GERMANY.
51.4064 SWED SWEDEN.
51.4064 SUIZ SWITZERLAND.
51.4065 CANCER INCIDENCE IN RUSSIA AND EAST EUROPEAN SATELLITES.
51.4066 CANCER INCIDENCE IN THE MIDDLE EAST AND NEAR EAST (INCLUDING TURKEY AND AFGHANISTAN BUT NOT EGYPT).
51.4066 ISRE ISRAEL.
51.4066 LEBE LEBANON.
51.4067 CANCER INCIDENCE IN AFRICA AND NEARBY ISLANDS (LIST INDIVIDUAL COUNTRIES IN ALPHABETICAL ORDER).
51.4067 EGYPT.
51.4067 GABO GABON.
51.4067 KENY KENYA.
51.4067 NIGE NIGERIA.
51.4067 UGANDA.
51.4068 CANCER INCIDENCE IN INDIA, PAKISTAN, AND FAR EAST (INCLUDING JAPAN AND INDONESIA).
51.4068 CHIN CHINA.
51.4068 INDI INDIA.
51.4068 JAPA JAPAN.
51.4068 EAPAK EAST PAKISTAN.
51.4068 WAPK WEST PAKISTAN AND SWAT.
51.4068 TAIW TAIWAN.
51.4069 CANCER INCIDENCE IN OTHER PARTS OF THE WORLD.
51.4069 AUSTRALIA.
51.4069 PI PACIFIC ISLANDS OTHER THAN JAPAN, NEW GUINEA AND INDONESIA.
51.4070 UNUSUAL CLUSTERING OF CANCER PATIENTS NOT INCLUDED ELSEWHERE.
SEE ALSO: 51.4025235 FOR "CLUSTERING" OF LEUKEMIA.
SEE ALSO: 51.405114 FOR CANCER CLUSTERS WITH STRONG EVIDENCE OF AN INFECTIOUS AGENT.
51.4070 CANCER ClUSTERS IN GENERAL.
51.4070 INCIDENCE OF CANCER IN FAMILIES AND FAMILY GROUPS.
51.4070 INCIDENCE OF CANCER IN TWINS AND SIBLINGS.
SEE ALSO: 51.4013 FOR GENETIC FACTORS RELATED TO CANCER INCIDENCE IN HUMANS.
SEE ALSO: 51.4013 FOR CANCER STUDIES IN HIGHLY INBRED POPULATIONS.
51.400 CANCER IN UNUSUAL ENVIRONMENTS.
51.4008 CANCER INCIDENCE DURING LONG TERM STAYS IN MENTAL HOSPITALS.
51.4009 OTHER TYPES OF CANCER EPIDEMIOLOGIC DATA.
51.4009 INCIDENCE OF MULTIPLE PRIMARY CANCER.
51.4009 CODINCIDENCE OF TWO DIFFERENT CANCERS IN THE SAME INDIVIDUAL.
SEE ALSO: 51.43252803 FOR TUMORS ASSOCIATED WITH LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.402526803 FOR TUMORS ASSOCIATED WITH LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.40154 FOR TUMORS ASSOCIATED WITH OTHER LYMPHORETICULAR PATHOLOGY.
51.400 CANCER EPIDEMIOLOGY NOT INCLUDED ELSEWHERE IN 51.400 OR IN CROSS REFERENCES INCLUDED IN 51.400.
51.401 SELECTED FACTORS AND ENDOGENOUS CONDITIONS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.407 FOR RELATION OF HORMONAL ENVIRONMENT TO THE DEVELOPMENT OF CANCER.
SEE ALSO: 51.515 FOR PROPERTIES OF MALIGNANT CELLS AND FACTORS INFLUENCING METASTASIS.
SEE ALSO: 51.7 FOR HOST-TUMOR INTERACTIONS AND EFFECT OF VARIOUS ENDOGENOUS HOST FACTORS ON THE GROWTH OF CANCER.
SEE ALSO: 51.74 FOR IMMUNOLOGICAL RESPONSE OF HOSTS TO TUMORS.
SEE ALSO: 51.43 FOR CARCINOGENIC ACTIVITY OF ENVIRONMENTAL AGENTS.
SEE ALSO: 51.45 FOR RELATION OF VIRUSES AND OTHER INFECTIOUS AGENTS TO CANCER DEVELOPMENT.
51.4011 GENERAL.
51.4012 NUTRITIONAL FACTORS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF CANCER IN HUMANS.
SEE ALSO: 51.4010 FOR ROLE OF NUTRITIONAL FACTORS IN ANIMAL CANCER.
SEE ALSO: 51.4022 FOR CARCINOGENICITY ASSOCIATED WITH TRACE ELEMENTS.
51.40121 GENERAL ASPECTS OF EFFECT OF DIET ON CANCER INCIDENCE.
51.40122 EFFECT OF PROTEIN.
51.40123 EFFECT OF LIPID.
51.40124 EFFECT OF CARBOHYDRATE.
51.40125 EFFECT OF VITAMINS.
51.40121 GENERAL ASPECTS OF EFFECT OF DIET ON CANCER INCIDENCE.
51.40122 EFFECT OF PROTEIN.
51.40123 EFFECT OF LIPID.
51.40124 EFFECT OF CARBOHYDRATE.
51.40125 EFFECT OF VITAMINS.
51.4013 GENETIC (HEREDITARY) FACTORS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF CANCER IN HUMANS.
SEE ALSO: 51.5112 FOR CHROMOSOME ABNORMALITIES IN CANCEROUS TISSUES.
SEE ALSO: 51.4007 FOR INCIDENCE OF CANCER IN FAMILIES.
SEE ALSO: 51.4015 FOR RELATIONSHIP OF CONGENITAL DEFECTS TO CANCER.
SEE ALSO: 51.4007 FOR GENETICS OF BASAL CELL NEVUS SYNDROME.
51.40131 GENERAL.
51.40132 AUTOSOMAL DOMINANT SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL RECESSIVE SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL DOMINANT SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL RECESSIVE SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL DOMINANT SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL RECESSIVE SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL DOMINANT SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A AUTOSOMAL RECESSIVE SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132 A1 ATAXIA-TELANGIECTASIA.
51.40132B01 BASAL CELL NEVUS SYNDROME.
SEE ALSO: 51.4083 FOR MOST INFORMATION.
51.40132C01 CHEDIAK-HIGASHI.
51.40132D01 DYSKERATOSIS CONGENITA.
51.40132E01 ESOPHAGEAL CARCINOMA.
51.40132F01 FANCONI'S ANEMIA.
51.40132G01 GARDNER'S SYNDROME.
51.40132H01 MALIGNANT MELANOMA.
51.40132I01 MALIGNANT MELANOMA.
51.40132J01 MALIGNANT MELANOMA.
51.40132K01 MALIGNANT MELANOMA.
51.40132L01 MALIGNANT MELANOMA.
51.40132M01 MALIGNANT MELANOMA.
51.40132N01 MALIGNANT MELANOMA.
51.40132O01 MALIGNANT MELANOMA.
51.40132P01 MALIGNANT MELANOMA.
51.40132Q01 MALIGNANT MELANOMA.
51.40132R01 MALIGNANT MELANOMA.
51.40132S01 MALIGNANT MELANOMA.
51.40132T01 MALIGNANT MELANOMA.
51.40132U01 MALIGNANT MELANOMA.
51.40132V01 MALIGNANT MELANOMA.
51.40132W01 MALIGNANT MELANOMA.
51.40132X01 MALIGNANT MELANOMA.
51.40132Y01 MALIGNANT MELANOMA.
51.40132Z01 MALIGNANT MELANOMA.
51.40133 RELATION OF SEX DIFFERENCES TO CANCER INCIDENCE.
COMPARISON OF CANCER INCIDENCE IN MALES AND FEMALES.
51.40134 RELATION OF CHROMOSOME DEFECTS TO CANCER INCIDENCE.
51.40135 CANCER INCIDENCE IN HIGHLY INBRED POPULATIONS.
51.4013501 GENERAL.
51.4013502 POSSIBLE RELATION OF CHORIOCARCINOMA TO INBREEDING.
51.40136 OTHER ASPECTS OF HOST INFLUENCES ON TUMOR DEVELOPMENT IN HUMANS.
SEE ALSO: 51.7 FOR HOST-TUMOR INTERACTIONS (INVASIVENESS, METASTASIS, VASCULARIZATION; AND TUMOR IMMUNOLOGY).
51.4014 OPEN.
51.4015 RELATION OF CANCER INCIDENCE TO GENERAL TYPES OF NON-MICROBIAL PATHOLOGY NOT INCLUDED ABOVE.
SEE ALSO: 51.402 FOR PREMALIGNANT PATHOLOGY LIMITED TO SPECIFIC TISSUES AND ORGAN SYSTEMS.
SEE ALSO: 51.4013 FOR SPECIFIC INHERITED DISEASES ASSOCIATED WITH CANCER.
SEE ALSO: 51.5113 FOR CYTOLOGY OF CANCEROUS AND PRECANCEROUS CELLS (GENERAL).
SEE ALSO: 51.45 FOR VIRAL DISEASES AND OTHER INFECTIOUS DISEASES RELATED TO CANCER.
SEE ALSO: 51.2180 FOR USE OF CLINICAL SYMPTOMS TO DIAGNOSE CANCER.
51.401501 GENERAL.
51.40152 CONGENITAL DEFECTS RELATED TO CANCER OCCURRENCE.
SEE ALSO: 51.40252 FOR RELATION OF CONGENITAL DEFECTS TO LEUKEMIA.
SEE ALSO: 51.40090 FOR CO-OCURRENCE OF TWO OR MORE PRIMARY CANCERS IN THE SAME INDIVIDUAL.

51.4015201 GENERAL.
51.4015202 RELATION OF MONGOLISM TO OCCURRENCE OF CANCER (GENERAL).
51.40153 RELATION OF IMMUNOCLOGICAL PATHOLOGY AND ALTERED HOST DEFENSE MECHANISMS TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.40132 FOR CERTAIN INHERITED DISEASES WHICH MAY INVOLVE IMMUNE DEFICIENCY.

51.401531 GENERAL.
51.401532 INCIOENCE IN PATIENTS WITH AUTOIMMUNE DISEASES.
51.40153201 GENERAL.
51.40153202 CANCER INCIDENCE ASSOCIATED WITH PERNICIOUS ANEMIA.
51.40153203 CANCER INCIDENCE ASSOCIATED WITH ULCERATIVE COLITIS.
51.401533 CANCER INCIDENCE IN PATIENTS WITH ALLERGIES, HYPERSENSITIVITY REACTIONS, AND HYPERIMMUNE DISEASES.
51.401534 CANCER INCIDENCE IN PATIENTS WITH DECREASED IMMUNE COMPETENCE.
51.4015341 GENERAL.
51.4015342 CANCER INCIDENCE IN IMMUNOSUPPRESSED PATIENTS.
51.4015343 CANCER INCIDENCE IN PATIENTS WITH HYPOIMMUNE DISEASES.
51.401534301 CANCER INCIDENCE ASSOCIATED WITH AGAMMAGLOBULINEMIA (BRUTON TYPE AND OTHER TYPES).

51.40154 RELATION OF LYMPHORETICULAR PATHOLOGY TO CANCER OCCURRENCE IN OTHER TISSUES.
51.4015401 RELATION OF LYMHOEDMA TO CANCER OCCURRENCE IN OTHER TISSUES.
SEE ALSO: 51.4025 FOR PREMALIGNANCY OF LYMPHORETICULAR TISSUES.
51.40155 RELATION OF ABNORMAL (AND NORMAL) ENDOGENOUS METABOLITES TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.4143 FOR CARCINOGENICITY OF DERIVATIVES TRYPTOPHANE METABOLITES IN ANIMALS.

51.401551 GENERAL.
51.401552 PATHOLOGY INVOLVING GAS TRANSPORT, GAS EXCHANGE, BODY FLUIDS, AND ELECTROLYTES AS RELATED TO CANCER OCCURRENCE.
SEE ALSO: 51.41251 FOR LYMHOEDMA IN ANIMALS.
51.40156 OTHER TYPES OF PATHOLOGY CO-OCcurring WITH CANCER (SUB-DIVIDED BY ORGAN SYSTEMS).
51.401563 CIRRHOSIS OF THE LIVER ASSOCIATED WITH CANCER OF THE MOUTH AND PHARYNX.

51.4016 EPIDEMIOLOGIC STUDIES OF RELATION BETWEEN VARIOUS ENVIRONMENTAL OR EXOGENOUS AGENTS OR FACTORS AND CANCER OCCURRENCE IN HUMANS.
SEE ALSO: 51.43 FOR STUDIES OF SELECTED ENVIRONMENTAL AGENTS RELATED TO CANCER.
SEE ALSO: 51.412 FOR EPIDEMIOLOGICAL STUDIES OF RADIATION CARCINOGENESIS.
SEE ALSO: 51.45 FOR VIRAL AND OTHER INFECTIOUS AGENTS IN CARCINOGENESIS.
SEE ALSO: 51.451 FOR CONTACT WITH ANIMALS IN RELATION TO CANCER INCID.
SEE ALSO: 51.46 FOR CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.47 FOR HORMONAL CARCINOGENESIS.

SEE ALSO: 51.43 FOR RELATION OF SMOKING AND CANCER.
51.401601 OPEN.
51.401602 RELATION OF TRAUMA TO CANCER OCCURRENCE IN HUMANS.
SEE ALSO: 51.4242 FOR SIMILAR INFORMATION IN ANIMALS.
51.401603 RELATION OF PHYSICAL FORCES AND ENVIRONMENTAL STRESS (HIGH ALTITUDES, CLIMATE, JETS) TO CANCER OCCURRENCE IN HUMANS.
SEE ALSO: 51.4242 FOR SIMILAR INFORMATION IN ANIMALS.
51.4017 RELATION OF MISCELLANEOUS FACTORS TO CANCER OCCURRENCE.
51.401701 RELATION OF MOTHER'S AGE TO CANCER OCCURRENCE IN CHILD.
51.401702 RELATION OF PERSONALITY AND PSYCHOLOGICAL FACTORS (STRESS) TO CANCER INCIDENCE.
51.401703 RELATION OF BREAST FEEDING AND CANCER OCCURRENCE.
51.4017031 GENERAL.
51.4017032 EFFECT OF CANCER INCIDENCE IN MOTHER.
51.4017033 EFFECT OF CANCER INCIDENCE IN CHILD.

NOTE: THE FOLLOWING CATEGORIES (51.402 TO 51.409) DEAL WITH CARCINOGENESIS AND EPIDEMIOLOGY OF CANCER IN SPECIFIC ORGANS AND SYSTEMS IN HUMANS.

MORE GENERAL ASPECTS OF EPIDEMIOLOGY ARE IN CLASSES 51.400 AND 51.401. STUDIES OF SPECIFIC CLASSES OF AGENTS ARE IN CLASSES 51.42 TO 51.49.
51.402 ETIOLOGY, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY AND OTHER CARCINOGENESIS STUDIES OF TUMORS OF THE CARDIOVASCULAR, LYMPHORETICULAR, AND RETICULOENDOTHELIAL SYSTEM IN HUMANS.
SEE ALSO: 51.40154 FOR RELATION OF LYMPHORETICULAR ABNORMALITIES TO OCCURRENCE OF CANCER IN OTHER ORGANS.

51.4021 GENERAL.

51.4022 ETIOLOGY OF HEART CANCER.

51.4023 OPED.

51.4024 ETIOLOGY OF BLOOD VESSEL TUMORS (ANGIOMAS).

51.4025 CARCINOGENESIS, ETIOLOGY, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA IN HUMANS.
SEE ALSO: 51.4532 FOR THE VIRAL ETIOLOGY OF LEUKEMIA.
SEE ALSO: 51.525 FOR NON-VIRAL ASPECTS OF LEUKEMIA (ONCE IT HAS DEVELOPED).

51.40251 GENERAL.

51.40252 ETIOLOGICAL EVIDENCE FOR RADIATION AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA.

51.402521 GENERAL.

51.402522 LEUKEMIA OCCURRENCE IN RADIOLOGISTS.

51.402523 LEUKEMIA INCIDENCE IN RADIOISOTOPE WORKERS.

51.402524 LEUKEMIA INCIDENCE IN SURVIVORS OF THE ATOMIC BOMBS.

51.402525 LEUKEMIA INCIDENCE IN PATIENTS WHO RECEIVED RADIOTHERAPY OR DIAGNOSTIC X-RAYS.

51.4025251 GENERAL.

51.4025252 EFFECT OF PRENATAL INTER-UTERINE EXPOSURE DURING PREGNANCY.

51.4025253 IN CHILDREN WHO HAD RECEIVED RADIATION (FOR THYMIC ENLARGEMENT AND OTHER CONDITIONS).

51.4025254 IN ADULTS WHO HAD RECEIVED RADIOTHERAPY (FOR CANCER, FOR ANKYLOSING SPONDYLITIS, AND OTHER CONDITIONS).

51.40253 ETIOLOGICAL EVIDENCE RELATED TO INFECTIOUS AGENTS (VIRUSES) AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA IN HUMANS.
SEE ALSO: 51.45252 FOR STUDIES OF VIRUS PARTICLES IN PATIENTS WITH LEUKEMIA.

51.402531 GENERAL.

51.402532 LEUKEMIA IN CHILDREN OF MOTHERS WITH LEUKEMIA DURING PREGNANCY.

51.402533 LEUKEMIA IN SIBLINGS AND OTHER MEMBERS OF FAMILY GROUPS.

51.402534 LEUKEMIA IN INDIVIDUALS WHO HAVE RECEIVED TRANSFUSIONS (INCLUDING CHILDREN RECEIVING EXCHANGE TRANSFUSIONS).

51.402535 "CLUSTERS" OF LEUKEMIA CASES IN LIMITED GEOGRAPHICAL AREAS (LEUKEMIA "AGGREGATES") AND IN SHORT PERIODS OF TIME.

51.402536 GEOGRAPHICAL LOCATION OF PATIENTS WITH LEUKEMIA.
SEE ALSO: 51.400611 FOR SPATIAL-TEMPORAL AGGREGATIONS OF CANCER IN GENERAL.

51.40254 TRANSMISSIBILITY OF LEUKEMIA FROM ANIMALS TO MAN AND RELATED ZOOEPIDEMIOLOGICAL STUDIES.
POSSIBLE ROLE OF DOGS, CATS, BIRDS, OTHER PETS, VETERINARY ANIMALS, AND OTHER ANIMALS.

51.40255 DRUG TOXICITY (DRUG-INDUCED BONE MARROW DEPRESSION) AS A FACTOR IN LEUKEMIA ETIOLOGY.

51.4025501 GENERAL.

51.4025502 PRODUCTION OF Lymphoma, PSEUDO LYMPHOMA, AND LYMPHADENOPATHIES BY ANTICONVULSANTS (Mephentoin, Dilantin, Mysoline, Geomin, Meparal).

51.4025503 LEUKEMIA ASSOCIATED WITH BENZENE POISONING.

51.40256 CORRELATION OF LEUKEMIA OCCURRENCE IN HUMANS WITH THE OCCURRENCE OF OTHER DISEASES AND PATHOLOGICAL CONDITIONS.

51.402561 GENERAL.

51.402562 CORRELATION OF LEUKEMIA WITH INFECTIOUS DISEASES (VIRUS, BACTERIA, PARVUS).

51.402562A1 GENERAL.

51.402562V1 RELATION TO VIRAL HEPATITIS.

51.402562M1 RELATION TO MONONUCLEOSIS.

51.402562M2 RELATION TO HERPES DISEASES.

51.402562M3 RELATION TO MEASLES.

51.402562C1 RELATION TO CYTOMEGALIC INCLUSION DISEASE (SALIVARY GLAND VIRUS ETIOLOGY).

51.40256201 NOTE: RELATION TO ORNITHOSIS (PSITTACOSIS OR PARROT FEVER).
6.
51.40256211 CORRELATION WITH BACTERIAL DISEASES.
51.402562P1L CORRELATION OF PPD OR PPD INFECTIONS WITH LEUKEMIA.
SEE ALSO: 51.45862 FOR ISOLATION OF PPD FROM PATIENTS WITH CANCER IN GENERAL.
51.402563 CORRELATION OF LEUKEMIA WITH CONGENITAL DEFECTS.
SEE ALSO: 51.5112 FOR CHROMOSOME ABNORMALITIES IN PATIENTS WITH CANCER.
SEE ALSO: 51.525214 FOR CHROMOSOME DEFECTS IN LEUKEMIC CELLS.
51.4025632 CORRELATION OF LEUKEMIA AND LYMPHOMA WITH MONGOLISM (DOWN'S SYNDROME OR TRISOMY 21).
LEUKEMIA IN SIBS OR PARENTS OF MONGOLS.
SEE ALSO: 51.40152 FOR RELATION OF MONGOLISM TO OCCURRENCE OF CANCER (GENERAL).
51.4025633 CONGENITAL LEUKEMIA IN NEWBORN.
51.402564 CORRELATION OF LEUKEMIA AND LYMPHOMA WITH IMMUNE DISEASES AND THYMUS PATHOLOGY IN HUMANS.
51.4025641 GENERAL.
51.4025642 CORRELATION WITH HYPOIMMUNE DISEASES AND IMMUNE DEFICIENCY SYNDROMES.
51.402564201 GENERAL.
51.402564202 AGAMMAGLOBULINEMIA.
51.402564203 HYPOGAMMAGLOBULINEMIA.
51.402564204 ATAXIA-TELANGIECTASIA.
51.4025643 CORRELATION WITH HYPERIMMUNE DISEASES.
51.402564301 GENERAL.
51.402564302 SJÖGREEN'S DISEASE.
51.402564302 RHEUMATOID ARTHRITIS.
51.402564304 SYSTEMIC LUPUS ERYTHEMATOSIS (SLE OR LE).
51.4025644 CORRELATION OF LEUKEMIA WITH THYMUS PATHOLOGY.
51.402568 OTHER CORRELATIONS IN HUMANS.
51.4025680: CORRELATION OF LEUKEMIA INCIDENCE WITH AGE OF MOTHER.
51.40256802 CORRELATION WITH MISCARRIAGES.
51.40256803 CORRELATION WITH OTHER TYPES OF CANCER.
51.4026 ETIOLOGY, EPIDEMIOLOGY AND CARCINOGENESIS OF LYMPHOMAS.
SEE ALSO: 51.432 FOR VIRAL ETIOLOGY OF BURKITT LYMPHOMAS AND SIMILAR LYMPHATIC NEOPLASMS.
51.40261 GENERAL.
51.40262 ETIOLOGY OF SPECIFIC TYPES OF LYMPHOMAS.
51.4026281 ETIOLOGY OF BURKITT'S LYMPHOMA.
51.40262HI ETIOLOGY OF HOOGKINS DISEASE.
51.40262M ETIOLOGY OF MYCOSIS FUNGOIDES.
51.4027 ETIOLOGY, PREMALIGNANT PATHOLOGY, EPIDEMIOLOGY, AND RELATED STUDIES OF OTHER HUMAN RETICULO-ENDOTHELIAL NEOPLASMS NOT INCLUDED IN 51.4025 OR 51.4026.
51.403 CARCINOGENESIS AND ETIOLOGY OF MUSCLE TUMORS; PREMALIGNANT MUSCLE PATHOLOGY.
51.404 CARCINOGENESIS AND ETIOLOGY OF NEOPLASMS OF THE KIDNEY, BLADDER, AND URINARY SYSTEM.
51.4041 GENERAL.
51.4042 CARCINOGENESIS AND ETIOLOGY OF KIDNEY TUMORS; PREMALIGNANT MUSCLE PATHOLOGY.
51.4043 CARCINOGENESIS AND ETIOLOGY OF URINARY SYSTEM NEOPLASMS.
51.404301 GENERAL.
51.404302 PREMALIGNANCY AND ETIOLOGY OF TUMORS OF THE BLADDER, URETER, URETHRA AND RELATED TISSUES.
SEE ALSO: 51.62233 FOR TRYPTOPHANE METABOLISM AND METABOLITES IN TUMOR-BEARING HOSTS (INCLUDING PATIENTS WITH BLADDER CANCER).
SEE ALSO: 51.4342 FOR CORRELATION OF BLADDER CANCER WITH SMOKING.
SEE ALSO: 51.4413 FOR CARCINOGENICITY OF TRYPTOPHANE METABOLITES IN ANIMALS.
SEE ALSO: 51.4603 FOR CARCINOGENICITY OF AROMATIC AMINES (BLADDER CARCINOGENS).
51.404303 RELATION OF HUMAN BLADDER TUMORS TO DRUGS, TOXIC AGENTS, AND UNUSUAL FOODS.
51.404303C1 CYCLOMATES AND BLADDER CANCER IN HUMANS.
51.404303C12 CHLORNAPHAN (FOR POLYLYCYTHEMA VERA) AND BLADDER CANCER.
51.405 ETIOLOGY, CARCINOGENESIS, EPIDEMIOLOGY, AND RELATED PREMALIGNANT PATHOLOGY OF SELECTED INTERNAL ORGANS IN HUMANS.
SEE ALSO: 51.47 FOR CARCINOGENESIS AND PRECANCEROUS PATHOLOGY OF ENDOCRINE GLAND TUMORS, AND THE GENITAL AND REPRODUCTIVE ORGANS.
CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF VISCERAL AND PERITONEAL TUMORS IN HUMANS.

CARCINOGENESIS AND EPIDEMIOLOGY OF MESOTHELIOMAS.
INDUCTION OF MESOTHELIOMAS BY ASBESTOS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF EXOCRINE GLAND TUMORS IN HUMANS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE LUNG, THE TRACHEO-BRONCHIAL SYSTEM, AND RELATED TISSUES IN HUMANS.
SEE ALSO: 51.4342 FOR OTHER INFORMATION ABOUT CARCINOGENIC ACTIVITY OF CIGARETTE SMOKE.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LIVER TUMORS (HEPATIC CANCER) IN HUMANS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF GASTROINTESTINAL TUMORS IN HUMANS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LIVER TUMORS (HEPATIC CANCER) IN HUMANS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LIVER TUMORS (HEPATIC CANCER) IN HUMANS.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF STOMACH CANCER IN HUMANS.

PRE-CANCROUS PATHOLOGY OF THE STOMACH (OR STOMACH AND INTESTINE) AND ITS RELATION TO CANCER IN HUMANS.

STOMACH ULCERS AND ULCERATIVE COLITIS IN RELATION TO STOMACH CANCER ETIOLOGY.

ATROPHIC GASTRITIS AND GASTRIC ATROPHY IN RELATION TO STOMACH CANCER ETIOLOGY.

GASTRIC POLyps (INFLAMMATORY FIBROID OR GASTRIC NEURAL POLyps) IN RELATION TO CANCER ETIOLOGY.

PERNICIOUS ANEMIA IN RELATION TO GASTROINTESTINAL CANCER ETIOLOGY.

INTESTINAL METAPLASIA OF THE GASTROINTESTINAL TRACT AS RELATED TO GASTROINTESTINAL CANCER.

ABNORMAL GASTRIC JUICE SECRETION AS RELATED TO GASTROINTESTINAL CANCER.

EPIDEMIOLOGIC ASPECTS OF GASTROINTESTINAL CANCER.

RELATION OF NUTRITION, DIET, AND DIETARY TOXINS (MYCOTOXINS) TO GASTROINTESTINAL CANCER.

CEREAL AND GRAIN DIETS IN RELATION TO GASTROINTESTINAL CANCER.

RELATION OF DRUGS TO GASTROINTESTINAL CANCER.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF INTESTINAL AND BOWEL CANCER.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE COLON AND RECTUM.

CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF PANCREATIC CANCER.

ALL CARCINOGENESIS OF THE GONADS AND OTHER SEX-RELATED TISSUES IS IN 51.47.
51.4071 GENERAL.
51.4072 ETIOLOGY AND CARCINOGENESIS OF TUMORS RELATED TO THE EYE.
PossiE. GENETIC DEFECT RELATED TO MALIGNANT MELANOMA.
51.4073 ETIOLOGY AND CARCINOGENESIS OF TUMORS RELATED TO THE EAR.
51.408 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF
CONNECTIVE TISSUES AND MINERALIZED TISSUES IN HUMANS.
51.4081 GENERAL.
51.4082 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF
CONNECTION TISSUE TUMORS.
51.40821 GENERAL.
51.40822 ETIOLOGY OF SPECIFIC TYPES OF CONNECTIVE TISSUE TUMORS.
51.408221 CARCINOGENESIS, EPIDEMIOLOGY, AND ETIOLOGY OF LIPOMAS AND OTHER LIPOID
TISSUE TUMORS.
51.4083 ETIOLOGY, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY, AND OTHER CARCINOGENESIS OF
SKIN CANCER (INCLUDING ALL MELANOMAS).
51.40831 GENERAL.
51.40832 EPIDEMIOLOGY, ETIOLOGY, AND CARCINOGENESIS OF MELANOMAS (INCLUDING NON-
CUTANEOUS MELANOMAS).

NOTE: ALL FOLLOWING DIVISIONS OF 51.4083 REFER TO SKIN CANCERS OTHER THAN MELANOMA.

51.40833 HISTOLOGIC AND CYTOLOGIC STUDIES OF OTHER HUMAN SKIN CANCER DEVELOPMENT.
51.40834 PREMALIGNANT LESIONS RELATED TO HUMAN SKIN CANCER ETIOLOGY.
51.408341 BASAL CELL NEVUS SYNDROME IN RELATION TO CANCER ETIOLOGY.
51.4083411 KERATOSIS, (ACTINIC OR SOLAR) AS PRECURSORS OF SKIN CANCER.
51.4083411 XERODERMA PIGMENTOSUM IN RELATION TO HUMAN SKIN CANCER
ETIOLOGY.
51.40835 BIOCHEMICAL AND OTHER APPROACHES TO HUMAN SKIN CANCER ETIOLOGY.
51.40836 ETIOLOGY, EPIDEMIOLOGY, AND CARCINOGENESIS OF SPECIFIC TYPES OF HUMAN
SKIN CANCER EXCEPT MELANOMA.
51.408361 ETIOLOGY AND RELATED STUDIES OF APocrine AND SEBACEOUS GLAND CANCER
IN HUMANS.
51.40837 SPECIFIC AGENTS SUSPECTED OF BEING RELATED TO HUMAN SKIN CANCER ETIOLOGY
AND RELATED PREVENTIVE MEASURES.
51.408371 THE SUN AND SOLAR RADIATION IN RELATION TO HUMAN SKIN CANCER.
51.4083711 ULTRAVIOLET RADIATION IN RELATION TO HUMAN SKIN CANCER.
SEE ALSO: 51.4083701 FOR SOLAR RADIATION ROLE IN HUMAN SKIN
CANCER.
51.4083711 ARSENIC IN RELATION TO HUMAN SKIN CANCER.
51.4084 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF BONE TUMORS.
DIFFERENCES IN THE OCCURRENCE OF BONE TUMORS BETWEEN MALES AND FEMALES AND
BETWEEN U.S. & JAPANESE POPULATIONS.
51.409 CARCINOGENESIS OF TUMORS OF SPECIFIC PARTS OF THE BODY.
51.4091 ETIOLOGY, EPIDEMIOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF
CANCER OF THE ORAL CAVITY AND ADJACENT AREA IN HUMANS.
51.40911 GENERAL.
51.40912 ETIOLOGY AND RELATED STUDIES OF LIP CANCER IN HUMANS.
51.40913 ETIOLOGY AND RELATED STUDIES OF TONGUE CANCER IN HUMANS.
51.40914 ETIOLOGY AND RELATED STUDIES OF ORAL MUCOSA CANCER IN HUMANS.
51.40915 OTHER ETIOLOGY OF HUMAN CANCER INVOLVING THE MOUTH AND BUCCAL CAVITY.
51.4092 ETIOLOGY, EPIDEMIOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF
CANCER OF THE NASAL AND THROAT CAVITIES (NASOPHARYNX) IN HUMANS.
51.40921 GENERAL.
51.40922 ETIOLOGY AND RELATED STUDIES OF SINUS CANCER IN HUMANS.
RELATION OF SINUS CANCER TO EXPOSURE TO RADIUM OR PROPANOI MANUFACTURE.
51.40923 ETIOLOGY AND RELATED STUDIES OF OTHER NASAL CAVITY CANCER IN HUMANS.
51.40924 ETIOLOGY AND RELATED STUDIES OF LARYNGEAL CANCER IN HUMANS.
51.40925 ETIOLOGY AND RELATED STUDIES OF PHARYNGEAL AND OTHER THROAT CANCER IN
HUMANS.
SEE ALSO: 51.40543. FOR ETIOLOGY OF ESOPHAGEAL CANCER.
51.4093 ETIOLOGY, EPIDEMIOLOGY, AND RELATED STUDIES OF CANCER OF THE HEAD, NECK,
JAW, AND FACE IN HUMANS.
SEE ALSO: 51.40912 FOR ETIOLOGY AND RELATED STUDIES OF SALIVARY GLAND
CANCER.
51.4094 ETIOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE APPENDAGES IN HUMANS.
51.40941 GENERAL.
51.40942 ARMS.
51.40943 HANDS.
51.400 -ECOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE SHOULDERS AND CHEST.
51.4001 GENERAL.
51.4002 SHOULDS.
51.4003 CHEST.

51.409 ECOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE LOWER TRUNK AND HIPS.
51.4091 GENERAL.
51.4092 ABDOMEN.
51.4093 PELVIC AREA.
51.4094 HIPS.

51.41 ECOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF CANCER OF SPECIFIC ORGANS AND TISSUES IN ANIMALS.
SEE ALSO: 51.45 FOR VIRAL ONCOLOGY.
SEE ALSO: 51.46 FOR CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.74 FOR IMMUNE FACTORS AFFECTING GROWTH OF ESTABLISHED TUMORS.
SEE ALSO: 51.4 FOR CARCINOGENESIS IN SPECIFIC TYPES OF ANIMALS.

NOTE: THIS CLASSIFICATION IS SUBDIVIDED LIKE 51.40 WHEN POSSIBLE.

51.410 GENERAL.
51.411 SELECTED FACTORS AND ENDOGENOUS CONDITIONS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF TUMORS IN ANIMALS.
SEE ALSO: 51.424 FOR EXOGENOUS AGENTS (INCLUDING CO-CARCINOGENS) WHICH STIMULATE CANCER INDUCTION BY CARCINOGENIC AGENTS.
SEE ALSO: 51.401 FOR LIST OF RELATED CLASSES.

51.4111 GENERAL.
51.4112 NUTRITIONAL FACTORS RELATED TO THE OCCURRENCE OF CANCER IN ANIMALS.
SEE ALSO: 51.433 FOR CARCINOGENICITY OF FOODS.
SEE ALSO: 51.4614 FOR CARCINOGENICITY OF AMINO ACID ANALOGS AND FOR ROLE OF CHOLINE DEFICIENCY IN TUMOR INDUCTION BY ETHIONINE.

SEE ALSO: 51.4600535 FOR EFFECT OF CARCINOGENS ON VITAMINS.
SEE ALSO: 51.4322 FOR CARCINOGENICITY ASSOCIATED WITH ELEMENTS.

51.41121 GENERAL.
51.41122 EFFECT OF VITAMIN DEFICIENCIES OR EXCESSES ON TUMOR DEVELOPMENT.
51.411221 GENERAL.
51.411222 EFFECT OF VITAMIN A STATUS ON CARCINOGENESIS IN ANIMALS.
51.411223 EFFECT OF B VITAMINS ON CARCINOGENESIS IN ANIMALS.
51.41123 EFFECT OF CHOLINE AND B-VITAMIN DEFICIENCY.

51.4113 ROLE OF HEREDITARY (GENETIC) FACTORS, SEX DIFFERENCE, AND SPECIES SPECIFICITY IN CANCER DEVELOPMENT IN ANIMALS.
SEE ALSO: 51.74 FOR GENETIC ASPECTS OF TUMOR IMMUNOLOGY.
SEE ALSO: 51.744 FOR GENETICS OF TUMOR TRANSPLANTATION.
SEE ALSO: 51.45 FOR THE IMMUNOGENETICS OF TUMOR INDUCTION BY ONCOGENIC VIRUSES.

SEE ALSO: 51.8600 FOR GENETICS OF PLANT TUMORS.

51.41131 GENERAL.
51.41132 GENETIC FACTORS (GENOTYPIC CHANGES AND PHENOTYPES) ASSOCIATED WITH INCREASED INCIDENCE OF CANCER IN ANIMALS.
51.411321 GENERAL.
51.411322 STRAINS OF MICE AND OTHER ANIMALS WITH A HIGH INCIDENCE OF SPONTANEOUS TUMORS.

51.411323 COMPARISONS OF TUMOR INDUCTION IN DIFFERENT STRAINS.

51.411324 TUMOR INCIDENCE IN C FAMILY OR HTF (HIGH TUMOR FAMILY) MICE, INCLUDING CBA AND C3H.
SEE ALSO: 51.8612 FOR GENETICS OF FISH MELANOMAS.
SEE ALSO: 51.4224 FOR STRAINS OF MICE WITH HIGH INCIDENCE OF LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.4764 FOR GENES DETERMINING THE INCIDENCE OF TESTICULAR TERATOMAS IN STRAIN 129 MICE.
SEE ALSO: 51.45 FOR ROLE OF GENETICS IN THE VIRUS-INDUCTION OF CANCER AND TRANSPLANTATION OF VIRUS-INDUCED TUMORS AND SUSCEPTIBILITY GENES.
SEE ALSO: 51.4262 FOR CHANGES IN CHROMOSOMES DURING CARCINOGENESIS.

51.4114 EFFECT OF IMMUNE FACTORS AND IMMUNE STATUS OF THE HOST ON TUMOR DEVELOPMENT IN ANIMALS.
EFFECT OF THYMECTOMY AND THYMUS EXTRACTS OR THYMUS TRANSPLANTS ON TUMOR DEVELOPMENT.
SEE ALSO: 51.451252 FOR CANCER INDUCED BY VIRUS IN THYMECTOMIZED ANIMALS.
SEE ALSO: 51.460055 FOR ROLE OF IMMUNITY IN CHEMICAL CARCINOGENESIS.

51.4115 OTHER HOST INFLUENCES ON TUMOR DEVELOPMENT.
SEE ALSO: 51.424 FOR EXOGENOUS AGENTS (INCLUDING CO-CARCINOGENS) WHICH STIMULATE CANCER OCCURRENCE OR INDUCTION BY CARCINOGENIC AGENTS.
SEE ALSO: 51.47162 FOR EFFECT OF PREGNANCY AND SEX HORMONES ON TUMOR DEVELOPMENT.
SEE ALSO: 51.4114 FOR MORE GENERAL ASPECTS OF THE INFLUENCE OF IMMUNE FACTORS ON CARCINOGENESIS.
SEE ALSO: 51.45 FOR ROLE OF IMMUNE FACTORS IN VIRAL INDUCTION OF CANCER.
SEE ALSO: 51.4512224 FOR THYMUS LEUKEMIA AND THE TL ANTIGEN.

51.412 CARCINOGENESIS, ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF CARDIOVASCULAR, LYMPHORETICULAR, AND RETICULOENDOTHELIAL TISSUES IN ANIMALS.

51.4122 ETIOLOGY OF CARDIAC CANCER IN ANIMALS.

51.4123 ETIOLOGY OF BLOOD VESSEL TUMORS (ANGIOMAS) IN ANIMALS.

51.4125 ETIOLOGY, CARCINOGENESIS, ZOOGEOEPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA IN ANIMALS (EXCLUDING ALL VIRAL ETIOLOGY).
SEE ALSO: 51.45 FOR LEUKEMOGENIC VIRUSES AND VIRAL ETIOLOGY OF LEUKEMIA.

51.41251 GENERAL.

51.41252 RADIATION AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA IN ANIMALS.
AGENTS THAT MODIFY LEUKEMIA INDUCTION BY IRRADIATION.
SEE ALSO: 51.4523803 FOR THE ROLE OF VIRUSES (RADIATION LEUKEMIA VIRUS) IN THE INDUCTION OF LEUKEMIA BY IRRADIATION.

51.41253 ROLE OF THE THYMUS, OTHER IMMUNE FACTORS, AND HOST IMMUNE STATUS IN LEUKEMOGENESIS IN ANIMALS.
ABILITY OF PROLONGED IMMUNE STIMULATION TO INDUCE CANCER.
SEE ALSO: 51.4114 FOR MORE GENERAL ASPECTS OF THE INFLUENCE OF IMMUNE FACTORS ON CARCINOGENESIS.
SEE ALSO: 51.45 FOR ROLE OF IMMUNE FACTORS IN VIRAL INDUCTION OF CANCER.
SEE ALSO: 51.4512224 FOR THYMUS LEUKEMIA AND THE TL ANTIGEN.

51.41254 ROLE OF GENETIC INFLUENCES ON THE DEVELOPMENT OF LEUKEMIA IN ANIMALS.
STRAINS OF MICE WITH HIGH OR LOW INCIDENCE OF LEUKEMIA.
GENETICS OF LEUKOSIS IN CATTLE.

51.41255 OTHER ENDOGENOUS FACTORS AFFECTING THE OCCURRENCE AND INDUCTION OF LEUKEMIA IN ANIMALS.

51.412551 EFFECT OF ENDOCRINE GLANOS AND HORMONES ON LEUKEMIA OCCURRENCE AND INDUCTION IN ANIMALS.

51.4125511 GENERAL.

51.4125512 EFFECT OF PITUITARY AND ITS HORMONE.

51.4125513 EFFECT OF THYROID GLAND AND HORMONES.

51.412551301 GENERAL.

51.412551302 INHIBITION OF LEUKEMIA INDUCTION BY THYROIDECTOMY.

51.412551303 STIMULATION OF LEUKEMIA INDUCTION BY THYROXINE.

51.4125514 EFFECT OF PARATHYROID GLAND AND HORMONES.

51.4125515 EFFECT OF ADRENAL GLAND AND HORMONES.
INHIBITION OF LEUKEMIA INDUCTION BY CORTISONE.

51.4125516 EFFECT OF Ovary, PLACENTA, AND FEMALE SEX HORMONES.

51.4125517 EFFECT OF TESTIS AND MALE SEX HORMONES.
11.

51.4125518 EFFECT OF OTHER HORMONAL SUBSTANCES.
51.412552 EFFECT OF ERYTHROPOIETIC- AND LEUKOPOIETIC-STIMULATING FACTORS.
51.41256 EXOGENOUS AGENTS WHICH INDUCE OR AFFECT THE OCCURRENCE AND INDUCTION OF LEUKEMIA IN ANIMALS.

51.4125601 GENERAL.
51.4125602 EXOGENOUS AGENTS THAT PREVENT LEUKEMIA OCCURRENCE OR INDUCTION.
SEE ALSO: 51.412551 FOR ENDOCRINE ALTERATIONS THAT PREVENT LEUKEMIA.

51.4125603 AROMATIC HYDROCARBONS (DMBA, METHYLCHLORANTHRENE).
51.4125604 URETHAN.
51.4125605 HYDRAZINE.
51.4125606 6-MERCAPTOPURINE.

51.4126 ETIOLOGY, CARCINOGENESIS, ZOOEPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA.

51.412601 GENERAL.
51.412602 EXOGENOUS AGENTS THAT PREVENT LEUKEMIA OCCURRENCE OR INDUCTION.
SEE ALSO: 51.412551 FOR ENDOCRINE ALTERATIONS THAT PREVENT LEUKEMIA.

51.412603 AROMATIC HYDROCARBONS (DMBA, METHYLCHLORANTHRENE).
51.412604 URETHAN.
51.412605 HYDRAZINE.
51.412606 6-MERCAPTOPURINE.

51.41259 OTHER ETIOLOGY, INCIDENCE, INDUCTION, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA.

51.4126 ETIOLOGY, CARCINOGENESIS, ZOOEPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKOMA IN ANIMALS (EXCLUDING ALL VIRAL ETIOLOGY).
SEE ALSO: 51.412701 FOR PLASMA CELL TUMOR ETIOLOGY.

51.41261 GENERAL.
51.41262 RADIATION AS A FACTOR IN THE ETIOLOGY OF LYMPHOMA IN ANIMALS.

51.412611 GENERAL.
51.412612 AGENTS AND CONDITIONS THAT INDUCE PLASMA CELL TUMORS.

51.412613 EXOGENOUS FACTORS AFFECTING THE OCCURRENCE AND INDUCTION OF LYMPHOMA IN ANIMALS.
SEE ALSO: 51.41262 FOR RADIATION AS CAUSE OF LYMPHOMA.

51.4126601 LYMPHOMA INDUCTION BY NITROSOUREAS.

51.41267 ETIOLOGY, INCIDENCE, OCCURRENCE, AND PREMALIGNANT PATHOLOGY OF SPECIFIC TYPES OF LYMPHOMAS IN ANIMALS.

51.4126702 NON-VIRAL ASPECTS OF ETIOLOGY, INDUCTION, AND OCCURRENCE OF THYMIC LYMPHOMAS.

51.4126703 NON-VIRAL ASPECTS OF CANINE LYMPHOMA ETIOLOGY.
51.4126704 NON-VIRAL STUDIES OF FELINE LYMPHOMA ETIOLOGY.
51.4126705 NON-VIRAL STUDIES OF HAMSTER LYMPHOMA ETIOLOGY.
51.4126706 NON-VIRAL STUDIES OF PURINE LYMPHOMA ETIOLOGY.
51.4126707 NON-VIRAL STUDIES OF LYMPHOMA ETIOLOGY IN OTHER ANIMALS.

51.41268 OTHER STUDIES OF LYMPHOMA ETIOLOGY IN ANIMALS.

51.4127 ETIOLOGY, CARCINOGENESIS, ZOOEPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF OTHER CANCER OF THE LYMPHORETICULAR AND RETICULOENDOTHELIAL SYSTEMS NOT INCLUDED IN 51.4125 (LEUKEMIA) OR 51.4126 (LYMPHOMA).

51.412701 ETIOLOGY AND RELATED STUDIES OF PLASMA CELL TUMORS.

51.4127011 GENERAL.
51.4127012 AGENTS AND CONDITIONS THAT INDUCE PLASMA CELL TUMORS.
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51.41534 ETIOLOGY, CARCINOGENESIS AND RELATED STUDIES OF ESOPHAGEAL CANCER IN ANIMALS.

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51.41544 ETIOLOGY, CARCINOGENESIS, AND RELATED STUDIES OF STOMACH CANCER IN ANIMALS.

51.415442 CYTOLOGIC AND HISTOLOGIC STUDIES OF CARCINOGENIC PROCESSES, PRECANCEROUS PATHOLOGY AND RELATED LESIONS OF THE STOMACH IN ANIMALS.

51.415441 RELATION OF GASTRIC ULCERS TO STOMACH CANCER.

51.41545 AGENTS WHICH INDUCE STOMACH CANCER.

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51.4154532 RADIATION-ROLE IN MELANOMA INDUCTION. (LISTED ALSO IN 51.45.)

51.4154531 OTHER AGENTS.

51.41546 ETIOLOGY, CARCINOGENESIS AND RELATED STUDIES OF COLON AND RETUM CANCER IN ANIMALS.

51.41547 ROLE OF FECES IN COLON TUMOR INDUCTION.

51.41547 ETIOLOGY, CARCINOGENESIS AND RELATED STUDIES OF PANCREATIC CANCER IN ANIMALS.

51.4155 NOT USED: SEE 51.47 FOR CARCINOGENESIS OF TUMORS RELATED TO GENITAL AND REPRODUCTIVE SYSTEMS.

51.4156 NOT USED: SEE 51.47 FOR ETIOLOGY OF ENDOCRINE TUMORS.

51.4156 CARCINOGENESIS: ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF THE NERVOUS SYSTEM IN ANIMALS.

51.4157 CARCINOGENESIS, ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF THE SENSE ORGANS IN ANIMALS.

51.41571 GENERAL.

51.41572 EYE AND ASSOCIATED TISSUE: HARDERIAN GLAND TUMORS; EYELID CARCINOMA.

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51.4158 CARCINOGENESIS: ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF CONNECTIVE AND MINERALIZED TISSUES IN ANIMALS.

51.41581 GENERAL.

51.41582 ETIOLOGY, CARCINOGENESIS, OCCURRENCE AND RELATED STUDIES OF CONNECTIVE TISSUE TUMORS IN ANIMALS.

51.415821 GENERAL.

51.415822 ETIOLOGY AND CARCINOGENESIS OF SARCOMAS (VERY GENERAL ASPECTS ONLY). MOST INFORMATION SHOULD BE IN MORE SPECIFIC CATEGORIES.

51.415823 ETIOLOGY, CARCINOGENESIS AND RELATED STUDIES OF LIPOMAS AND OTHER FATTY TISSUE TUMORS.

51.41583 ETIOLOGY, CARCINOGENESIS, OCCURRENCE AND RELATED STUDIES OF SKIN TUMORS AND ALL MELANOMAS IN ANIMALS.

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51.415832 ETIOLOGY, CARCINOGENESIS, OCCURRENCE, AND RELATED STUDIES OF MELANOMAS (INCLUDING NON-CUTANEOUS MELANOMAS) IN ANIMALS.

51.4158321 GENERAL.

51.4158322 HISTOLOGY, CYTOLOGY, AND PATHOLOGY OF MELANOMA DEVELOPMENT.

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51.41583242 AAF AND DERIVATIVES (COPPER CHELATES OF N-OH-AAF).

51.41583243 AROMATIC HYDROCARBONS (DIBA).

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NOTE: FOLLOWING DIVISIONS OF 51.4158 REFER TO SKIN Cancers OTHER THAN MELANOMA.
51.41833 GENETIC ASPECTS OF SKIN CANCER ETIOLOGY IN ANIMALS.
51.41834 BIOCHEMICAL AND METABOLIC ASPECTS OF SKIN CANCER ETIOLOGY IN ANIMALS.
51.41835 HISTOLOGIC, CYTOLOGIC, AND PATHOLOGIC ASPECTS OF SKIN CANCER ETIOLOGY IN ANIMALS.
51.41936 INOCULATION OF SKIN CANCER BY AROMATIC HYDROCARBONS IN ANIMALS.
51.41837 OTHER AGENTS WHICH INDUCE SKIN CANCER IN ANIMALS.
SEE ALSO: 51.443 FOR ALL INFORMATION ABOUT CANCER INDUCTION BY ULTRA-VIOLET LIGHT.
51.41837A1 GENERAL.
51.41837R1 RADIATION OTHER THAN ULTRA-VIOLET LIGHT.
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51.41838 AGENTS WHICH MODIFY SKIN CANCER OCCURRENCE AND INDUCTION IN ANIMALS.
51.418381 GENERAL.
51.418382 NON-CARCINOGENIC AGENTS WHICH STIMULATE SKIN CANCER.
SEE ALSO: 51.434 FOR CROTONE OIL AND OTHER CO-CARCINOGENS USED IN EXPERIMENTAL SKIN CARCINOGENESIS.
51.41839 OTHER ASPECTS OF SKIN CANCER ETIOLOGY AND CARCINOGENESIS IN ANIMALS.
51.4184 ETIOLOGY, CARCINOGENESIS, OCCURRENCE AND RELATED STUDIES OF BONE CANCER IN ANIMALS.
SEE ALSO: 51.4125 FOR ETIOLOGY OF CANCER INVOLVING HEMATOPOIETIC SYSTEM (INCLUDING BONE MARROW).
51.419 CARCINOGENESIS, ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF SPECIFIC PARTS OF THE BODY IN ANIMALS.
SEE ALSO: 51.4767 FOR CARCINOGENESIS OF THE FETUS.
51.4191 ETIOLOGY, CARCINOGENESIS, OCCURRENCE, AND RELATED STUDIES OF CANCER OF THE ORAL AND BUCAL AREA IN ANIMALS.
51.41911 GENERAL.
51.41912 STUDIES OF CARCINOGENESIS OF CHEEK Pouches (HAMSTERS AND OTHER ANIMALS).
51.41913 CARCINOGENESIS AND ETIOLOGY INVOLVING ORAL MUCOSA.
51.41914 ETIOLOGY, CARCINOGENESIS, OCCURRENCE AND RELATED STUDIES OF CANCER IN NOSE AND THROAT AND RELATED CAVITIES IN ANIMALS.
51.41921 GENERAL.
51.41922 ETIOLOGY OF NASAL AND SINUS CANCER IN ANIMALS.
PRODUCTION OF THESE TUMORS BY NITROSAMINES.
51.41923 ETIOLOGY OF PHARYNGEAL CANCER IN ANIMALS.
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51.4194 ETIOLOGY, CARCINOGENESIS, OCCURRENCE, AND RELATED STUDIES OF CANCER OF APPENDAGES AND OTHER GENERAL AREAS OF THE BODY.
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51.422 THEORIES OF CARCINOGENESIS AND STAGES OF CANCER DEVELOPMENT (GENERAL).
SEE ALSO: 51.424 FOR CO-CARCINOGENS.
SEE ALSO: 51.425 FOR THEORIES BASED ON CHANGES IN MOLECULAR GENETICS AND MOLECULAR BIOLOGY DURING CELL TRANSFORMATION AND CARCINOGENESIS.
SEE ALSO: 51.47 FOR HOST-TUMOR INTERACTIONS, HOST RESISTANCE TO TUMORS, AND FACTORS MODIFYING TUMOR DEVELOPMENT.
SEE ALSO: 51.46022 FOR PROTEIN-BINDING THEORY.
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51.4221 GENERAL: REVERSIBLE AND IRREVERSIBLE STAGES (THE TWO-PHASE THEORY OF CARCINOGENESIS) (THE SUMMATION THEORY OF CARCINOGENESIS) OR THE "CRITICAL PERIOD".

PERMISSIVE AND DIRECTIVE FACTORS.

51.4222 THE "INITIATION" OR "INDUCTION" STAGE (GENERAL).

LATENT OR DORMANT TUMOR CELLS; LATENT NEOPLASTIC POTENTIALITIES.

CONDITIONAL" PAPILLOMAS OR CARCINOMATOIDS: STATE OF DEVELOPMENTAL IMMINENCE.

SEE ALSO: 51.43 TO 51.49 FOR THEORIES ABOUT INDUCTION OF CANCER FOR SPECIFIC CARCINOGENS.

51.4223 THE "CONVERSION" STAGE.

51.4224 THE "PROMOTION" AND "PROGRESSION" STAGES OF CARCINOGENESIS.

SEE ALSO: 51.424 FOR COCARCINOGENS AND FACTORS THAT PROMOTE THE ACTION OF CARCINOGENS.

SEE ALSO: 51.7 FOR ENDOGENOUS FACTORS AFFECTING TUMOR DEVELOPMENT (HOST-TUMOR INTERACTIONS).

51.4225 RELATION OF CARCINOGENS, MUTAGENS, AND TERATOGENS.

THE "MUTATION HYPOTHESIS" OF CANCER ETIOLOGY.

51.423 GENERAL METHODS AND SYSTEMS FOR STUDYING THE MECHANISM OF CARCINOGENESIS AND CARCINOGEN-INDUCED TRANSFORMATION.

SEE ALSO: 51.425 FOR CHANGES IN BIOCHEMISTRY AND MOLECULAR GENETICS DURING CARCINOGENESIS.

SEE ALSO: 51.426 FOR CHANGES IN CYTOLOGY AND MORPHOLOGY DURING CARCINOGENESIS.

51.4231 GENERAL.

51.4232 TRANSFORMATION OF NORMAL AND BENIGN CELLS TO MALIGNANT CELLS IN VITRO AND IN TISSUE CULTURE.

51.4232D GENERAL.

51.4232D2 DEDIFFERENTIATION OF CULTURED CELLS WITH LOSS OF CELL FUNCTION IN GENERAL.

51.4232D3 DEDIFFERENTIATION OF CELLS DURING TRANSFORMATION OF NORMAL TO MALIGNANT CELLS (GREENSTEIN'S "CONVERGENCE").

ORIGIN OF TUMORS FROM ONE CELL OR FROM MANY CELLS.

51.42331 GENERAL.

51.42332 STUDIES OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE VARIANTS AND OTHER ENZYMES CONTROLLED BY THE X-CHROMOSOME AS A CLUE TO THE ORIGIN OF TUMOR CELL POPULATIONS.

51.4234 SPECIAL IN VIVO SYSTEMS FOR STUDYING MALIGNANT TRANSFORMATION.

51.423401 GENERAL.

51.423402 STUDIES OF APPARENTLY NORMAL TISSUES FROM ANIMALS WITH CANCER WHEN TRANSPLANTED INTO OTHER ANIMALS AND VICE VERSA.

GROWTH OF TUMORS WHEN TISSUES FROM HUMANS OR ANIMALS WITH TUMORS ARE TRANSPLANTED INTO HUMANS OR ANIMALS WITH CANCER.

51.424 CO-CARCINOGENS, CO-CARCINOGENESIS, AND EXOGENOUS FACTORS WHICH STIMULATE CARCINOGENESIS.

NON-CARCINOGENS WHICH STIMULATE CANCER INDUCTION BY CARCINOGENS.

SEE ALSO: 51.411 FOR EFFECT OF NUTRITIONAL, IMMUNOLOGICAL, HEREDITARY (GENETIC) AND OTHER ENDOGENOUS FACTORS ON CANCER OCCURRENCE OR INCIDENCE.

SEE ALSO: 51.424 FOR THE "PROMOTION" OR "PROGRESSION" STAGES OF CARCINOGENESIS.

51.4241 GENERAL.

51.4242 PSYCHOLOGICAL STRESS, TRAUMA, OR IRRITATION AS FACTORS THAT STIMULATE CANCER INDUCTION OR INCREASE CANCER INCIDENCE.

SEE ALSO: 51.4016 FOR SIMILAR CATEGORIES LIMITED TO HUMANS.

51.4242D GENERAL.

51.4242D2 WOUNDING TISSUE AND WOUND HEALING AS FACTORS STIMULATING THE CARCINOGENIC PROCESS.

51.4242D3 ELECTROSHOCK, INDUCED GROWTHS, OR SEIZURES AS FACTORS STIMULATING THE CARCINOGENIC PROCESS.

51.4242D4 HYPERTHERMIA (GAIT FREEZING) OR HYPERTHERMIA AS FACTORS STIMULATING THE CARCINOGENIC PROCESS.

51.4242D5 EFFECT OF HIGH ALTITUDES ON CANCER INCIDENCE.

51.4243 CO-CARCINOGENICITY OF SUBSTANCES FROM PLANTS, BACTERIA, FUNGI, AND VIRUSES.

SEE ALSO: 51.4332 FOR CARCINOGENIC ACTIVITY OF FUNGI-CONTAMINATED FOODS.

SEE ALSO: 51.443 FOR CARCINOGENIC AGENTS FROM PLANT MATERIALS.

SEE ALSO: 51.4342 FOR CO-CARCINOGENIC ACTIVITY OF TOBACCO SMOKE AND OTHER SUBSTANCES.

SEE ALSO: 51.44 FOR CARCINOGENICITY OF VIRUSES AND VIRUS NUCLEIC ACIDS.

SEE ALSO: 51.49 FOR SYNERGISM BETWEEN VIRUSES AND CHEMICAL CARCINOGENS.
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51.424301 GENERAL.
51.424302 CROTON OIL AND PHORBOL ESTERS AS CO-CARCINOGENS.
51.424304 BACTERIA AND BACTERIAL SUBSTANCES OR PRODUCTS AS CO-CARCINOGENS.
51.424305 VIRUSES AND VIRAL SUBSTANCES OR PRODUCTS AS CO-CARCINOGENS.
51.4244 COCARCINOGENICITY OF SUBSTANCES FROM ANIMAL TISSUES.
   SEE ALSO: 51.48 FOR CARCINOGENS FROM ANIMAL SOURCES.
51.424401 GENERAL.
51.424402 COCARCINOGENICITY OF CELL-FREE EXTRACTS FROM CHEMICALLY INDUCED TUMORS.
   SEE ALSO: 51.45 FOR ALL INFORMATION ON POSSIBLE ROLE OF CANCER VIRUSES IN CHEMICALLY-INDUCED TUMORS.
51.424403 COCARCINOGENICITY OF THYMUS EXTRACTS AND THYMUS CELLS.
   THYMUS CELLS AND EXTRACTS FROM NEONATAL MICE STIMULATE OMPA-INDUCED LUNG CARCINOGENESIS.
51.424404 PROMINE.
   SEE ALSO: 43.35181 FOR MORE GENERAL INFORMATION ABOUT PROMINE.
51.4245 CO-CARCINOGENIC ACTIVITY OF OTHER CHEMICAL AGENTS.
   51.424511 GENERAL.
   51.424511 OHSO.
   51.424511 ETHANOL.
   51.424512 EPHEDRINE.
   51.424511 COCARCINOGENIC ACTIVITY OF OODECANE (IN DECALIN) AND OTHER ALIPHATIC HYDROCARBONS.
   51.424511 PIPERONYL BUTOXIDE AND PIPERONYL SULFOXIDE.
   51.424512 PHENOLS.
   51.424511 RESERPINE.
51.4249 CO-CARCINOGENIC ACTIVITY OF OTHER AGENTS NOT INCLUDED ABOVE.
   NOTE: THE FOLLOWING CLASS IS LIMITED TO THE EFFECT OF CARCINOGENS ON THE BIOCHEMISTRY AND METABOLISM OF CELLS AND CHANGES IN LEVEL OR METABOLISM OF VARIOUS COMPOUNDS DURING CARCINOGENESIS.

51.425 METABOLIC AND OTHER BIOCHEMICAL CHANGES DURING NON-VIRAL CARCINOGENESIS AND MALIGNANT TRANSFORMATION.
   MOLECULAR GENETICS OF CARCINOGENESIS.
   SEE ALSO: 51.6 FOR ALL OTHER ASPECTS OF CANCER BIOCHEMISTRY.
51.4250 GENERAL.
51.42501 THEORIES OF NON-VIRAL CARCINOGENESIS AND MALIGNANT TRANSFORMATION BASED ON BIOCHEMICAL AND MOLECULAR GENETIC PHENOMENA.
51.4251 CHANGES IN NUCLEIC ACIDS AND NUCLEIC ACID METABOLISM DURING CARCINOGENESIS.
   EFFECT OF CARCINOGENS ON NUCLEIC ACIDS AND NUCLEIC ACID METABOLISM.
   TRANSFORMATION INDUCED BY DNA OR TUMOR EXTRACTS.
   SEE ALSO: 51.45 FOR TUMOR INDUCTION BY CELL-FREE EXTRACTS IF VIRUSES ARE INVOLVED.
51.4252 CHANGES IN AMINO ACIDS AND PROTEINS AND THE BIOSYNTHESIS AND METABOLISM OF AMINO ACIDS AND PROTEINS DURING CARCINOGENESIS.
51.42521 GENERAL.
51.42522 CHANGES IN AMINO ACIDS (GENERAL) AND THEIR METABOLITES.
   (ADD 3 LETTER CODE FOR SPECIFIC AMINO ACIDS).
   51.42522CYS CHANGES IN CYSTEINE, CYSTEINE, AND OTHER SH COMPOUNDS AND THEIR METABOLISM DURING CARCINOGENESIS.
51.42523 CHANGES IN PROTEIN BIOSYNTHESIS AND COMPONENTS OF THE PROTEIN-SYNthesizing SYSTEM DURING CARCINOGENESIS.
51.425231 GENERAL.
51.425232 CHANGES IN T-RNA DURING CARCINOGENESIS.
51.425233 CHANGES IN RIBOSOMES DURING CARCINOGENESIS.
51.425234 CHANGES IN P-RNA DURING CARCINOGENESIS.
51.425235 CHANGES IN PROTEIN SYNTHESIZING ENZYMES DURING CARCINOGENESIS.
51.4253 CHANGES IN LIPIDS AND LIPID METABOLISM DURING CARCINOGENESIS.
51.4254 CHANGES IN CARBOHYDRATES AND POLYSACCHARIDES AND THEIR METABOLISM DURING CARCINOGENESIS.
51.4255 CHANGES IN VITAMINS AND THEIR METABOLISM DURING CARCINOGENESIS.
51.4256 CHANGES IN ENZYMES DURING CARCINOGENESIS.
   SEE ALSO: 51.46 FOR ENZYME DELETION DURING CARCINOGENESIS.
51.4257 CHANGES IN ENERGY METABOLISM AND COENZYMES DURING CARCINOGENESIS OR MALIGNANT TRANSFORMATION.
51.4259 OTHER CHANGES IN BIOCHEMISTRY AND METABOLISM DURING CARCINOGENESIS OR MALIGNANT TRANSFORMATION.
51.426 ALTERATIONS IN CELL MORPHOLOGY AND CYTOLOGY DURING CARCINOGENESIS.
51.4261 GENERAL.
51.4262 CHANGES IN THE NUCLEUS AND CHROMOSOMES DURING CARCINOGENESIS. CHANGES IN APPEARANCE, NUMBER, AND TYPE OF CHROMOSOMES DURING CARCINOGENESIS.
51.4263 CHANGES IN MITOCHONDRIA DURING CARCINOGENESIS.
51.4264 CHANGES IN MICROSUMES DURING CARCINOGENESIS.
51.4265 CHANGES IN LYSOSOMES DURING CARCINOGENESIS.
51.4266 CHANGES IN CELL MEMBRANES DURING CARCINOGENESIS.
51.4269 CHANGES IN OTHER ASPECTS OF CELL MORPHOLOGY AND CYTOLOGY DURING CARCINOGENESIS.

51.43 CARCINOGENIC EFFECT OF EXOGENOUS ENVIRONMENTAL AGENTS NOT INCLUDED IN RADIATION CARCINOGENESIS (51.44), VIRAL CARCINOGENESIS (51.45), CHEMICAL CARCINOGENESIS (51.46), OR HORMONAL CARCINOGENESIS (51.47).

See also: 51.458 FOR EFFECT OF NON-VIRAL MICROBES ON CANCER INCIDENCE AND DEVELOPMENT (CANCER IN GERM FREE ANIMALS).
See also: 51.4006 FOR EPIDEMIOLOGY OF CANCER IN SPECIFIC GEOGRAPHIC AREAS.
See also: 51.424 FOR COCARCINOGENS AND FOR COCARCINOGENIC EFFECT OF ENVIRONMENTAL AGENTS.

51.431 GENERAL.
See also: 51.46004 FOR METHODS FOR DETECTING CARCINOGENS IN THE ENVIRONMENT AND ELSEWHERE.

51.4311 GENERAL ARTICLES AND BOOK REVIEWS.

51.4313 PREVENTION OF CANCER INDUCTION BY ENVIRONMENTAL AGENTS.

51.432 INDUSTRIAL CARCINOGENS, OCCUPATIONAL CARCINOGENESIS, AND CARCINOGENICITY OF ELEMENTS AND MINERALS.

See also: 51.4322 FOR CARCINOGENIC ACTIVITY OF ELEMENTS, METAL COMPLEXES, AND INORGANIC COMPOUNDS.

51.4322 CARCINOGENIC ACTIVITY OF ELEMENTS, METAL COMPLEXES, AND INORGANIC COMPOUNDS.

See also: 51.4323 FOR CARCINOGENICITY OF VARIOUS MINERALS.
See also: 51.446 FOR CARCINOGENIC ORGANIC CHEMICALS.
See also: 51.444 FOR CARCINOGENIC ACTIVITY OF RADIOACTIVE ISOTOPES AND ELEMENTS (INCLUDING URANIUM).

51.4322AA GENERAL.

51.4322AA1 RELATION OF TRACE ELEMENTS IN GENERAL TO CARCINOGENESIS.

51.4322AL ALUMINUM AND ALUMINUM FOIL AS CARCINOGENIC AGENTS.

51.4322AS ARSENIC AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

Possible carcinogenic hazard of Arsenic residues in foods.

51.4322BE BERYLLIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

51.4322CA CALCIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

51.4322CO CADMIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

Production of testicular tumors by cadmium compounds.

51.4322CO COBALT AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

51.4322CR CHROMIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS (INCLUDING CHROMATES).

Lung cancer induction by Chromium.

51.4322FE IRON AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

See also: 51.436101 FOR CARCINOGENICITY OF IRON COMPLEXES AND IRON-CONTAINING DRUGS USED TO TREAT IRON DEFICIENCY ANEMIA.

51.4322NI NICKEL AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS (INCLUDING NICKEL CARBONYL).

Lung cancer induction by Nickel carbonyl.

51.4322PB LEAD AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

Hyperplasia and possible neoplasia induced by Feeding lead.

51.4322SE SELENIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

Liver tumor induction by Potassium Ammonium Selenide.

51.4322ZN ZINC AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.

51.4323 CARCINOGENESIS ASSOCIATED WITH MINING AND MINERAL PROCESSING INDUSTRIES (AND RELATED DUSTS AND GASES).

See also: 51.4322 FOR CARCINOGENIC ACTIVITY OF ELEMENTS, METAL COMPLEXES, AND INORGANIC COMPOUNDS.

See also: 51.4352 FOR CARCINOGENICITY OF AIR POLLUTANTS (INCL. SULFUR DIOXIDE).
51.432301 GENERAL
51.4323011 CANCER INCIDENCE IN MINERS AND WORKERS IN MINERAL PROCESSING INDUSTRIES.
51.432302 CARCINOGENICITY OF ASBESTOS.
51.432303 CARCINOGENICITY OF MINE DUSTS (GENERAL).
51.432304 CARCINOGENICITY OF TALC (TALC GRANULOMAS).
51.432305 CARCINOGENESIS RELATED TO URANIUM MINING AND URANIUM MINERS.
51.4324 CARCINOGENESIS RELATED TO INDUSTRIES WHICH MANUFACTURE OR USE ORGANIC CHEMICALS.
51.432401 GENERAL.
51.4324011 REVIEWS.
51.4324012 REGULATION OF MANUFACTURING, IMPORTATION AND USE OF CARCINOGENIC CHEMICALS IN DIFFERENT COUNTRIES.
51.432402 CANCER INCIDENCE IN THE COAL TAR INDUSTRIES AND WORKERS USING COAL TAR FRACTIONS.
51.432403 CANCER INCIDENCE AND ETIOLOGY RELATED TO THE PRODUCTION OR USE OF MINERAL OIL AND OTHER PETROLEUM OILS AND WAXES.
51.4325 CANCER INCIDENCE IN EMPLOYEES OF INORGANIC CHEMICAL INDUSTRIES.
51.432501 GENERAL.
51.432502 CANCER IN STEELWORKERS.
51.433 CARCINOGENICITY AND COCARCINOGENICITY OF FOODS, FOOD ADDITIVES, BEVERAGES, AND EXTRANEOUS SUBSTANCES PRESENT IN FOODS.
51.4331 GENERAL.
51.4332 CARCINOGENS IN FUNGI-CONTAMINATED OR FERMENTED FOODS AND CARCINOGENICITY OF MYCOTOXINS (MOLOY PEANUT MEAL).
51.4333 CYCADS AND CARCINOGENIC ACTIVITY OF CYCASIN AND ITS AGLYCONE (METHYL ADOXYMETHANOL).
51.4334 CARCINOGENIC ACTIVITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4334A1 GENERAL.
51.4334A12 CARCINOGENIC SUBSTANCES IN ALCOHOLIC (FERMENTED) BEVERAGES (WHISKEY).
51.4334C1 CYCADS AND CARCINOGENIC ACTIVITY OF CYCASIN AND ITS AGLYCONE (METHYL ADOXYMETHANOL).
51.4334E1 CARCINOGENICITY OF OXIDIZED OR UNSATURATED FATTY ACIDS.
51.4334F1 CARCINOGENICITY OF IRRADIATED LIPIDS AND FATTY ACIDS.
51.4335 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335A1 GENERAL.
51.4335A12 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335A2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335B1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335B2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335B3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335C1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335C2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335C3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335D1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335D2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335D3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335E1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335E2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335E3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335F1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335F2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335F3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335G1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335G2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335G3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335H1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335H2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335H3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335I1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335I2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335I3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335J1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335J2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335J3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335K1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335K2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335K3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335L1 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335L2 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4335L3 CARCINOGENICITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4334 STEROIDS IN FOODS. POSSIBLE CONVERSION OF STEROIDS TO AROMATIC HYDROCARBON CARCINOGENS.
Carcinogenic Substances in the Steroid Fraction of Hen Eggs. Carcinogenicity of Other Animal Steroids (Lithocholic Acid and Other Bile Acids).
51.434 COFFEE AND OTHER BREWS (SUCH AS TEAS FROM SOME AFRICAN BUSHES). Carcinogenicity of Phenols from These Teas. See also: 51.4366 FOR HERBAL REMEDIES AND FOLK MEDICINES.
51.4341 CARCINOGENIC ACTIVITY OF TANNIC ACID.
51.4342 DEVELOPMENT OF HEPATOMA IN TROUT FED DRIED FISH MEAL AND DRIED COTTONSEED MEAL.
51.4335 CARCINOGENIC, POTENTIALLY CARCINOGENIC, OR CO-CARCINOGENIC ACTIVITY OF FOOD ADDITIVES.
See also: 51.4325 FOR CARCINOGENICITY OF SELENIUM COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
See also: 51.4326 FOR CARCINOGENICITY OF ARSENIC COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
See also: 51.435 FOR CARCINOGENESIS RELATED TO CHEMICAL RESIDUES UNINTENTIONALLY PRESENT IN FOODS.
51.43351 TWEEN 60 (POLYOXYETHYLENE SORBITAN STEARATE).
51.43352 CYCLAMATES.
51.43353 SACCHARIN.
51.4336 CARCINOGENIC AGENTS ASSOCIATED WITH CUSTOMS AND HABITS.
See also: 51.4004 FOR EPIDEMIOLOGICAL STUDIES OF ETHNIC, RACIAL, RELIGIOUS, AND SOCIAL GROUPS.
51.434 GENERAL.
51.4341 CARCINOGENIC AND CO-CARCINOGENIC ACTION OF CIGARETTES, TOBACCO SMOKE, UNCOMBUSTED TOBACCO, AND OTHER TOBACCO-RELATED PRODUCTS.
See also: 51.434 FOR RELATION OF CIGARETTE SMOKE TO BLADDER CANCER IN ANIMALS.
See also: 51.405 FOR OTHER EPIDEMIOLOGICAL STUDIES ON LUNG CANCER.
51.4342 ISOLATION AND IDENTIFICATION OF CARCINOGENIC FRACTIONS (TARS) AND OTHER COMPOUNDS AND SUBSTANCES IN CIGARETTE AND TOBACCO SMOKE.
51.43420 CARCINOGENIC ACTIVITY AND ROLE OF Po-210 POLONIUM (Po) IN CIGARETTE SMOKE.
51.43423 EXPERIMENTAL STUDIES OF CIGARETTE AND TOBACCO SMOKE AND RELATED SUBSTANCES IN ANIMALS.
See also: 51.434230 FOR INDUCTION OF LUNG TUMORS AND OTHER RESPIRATORY TRACT AND PULMONARY SYSTEM TUMORS BY TOBACCO SMOKE AND RELATED PRODUCTS IN ANIMALS.
See also: 51.434238 FOR INDUCTION OF SKIN TUMORS BY TOBACCO TAR AND OTHER TOBACCO-RELATED PRODUCTS.
51.43424 CARCINOGENICITY OF CIGARETTE AND TOBACCO SMOKE AND RELATED SUBSTANCES IN HUMANS.
51.434241 GENERAL.
51.434242 EPIDEMIOLOGICAL SURVEYS AND OTHER STUDIES RELATING CANCER TO SMOKING HABITS IN MEN AND WOMEN.
51.4342423 CORRELATION OF SMOKING WITH BLADDER CANCER.
51.4342425 CORRELATION OF SMOKING WITH LUNG CANCER.
51.4342428 CORRELATION OF SMOKING WITH GASTRIC CANCER.
51.4342429 RELATION OF SMOKING TO OTHER TYPES OF CANCER.
51.43425 METHODS FOR PREVENTING OR REDUCING CANCER INDUCTION BY TOBACCO SMOKE.
51.434251 GENERAL.
51.434252 WAYS TO REDUCE SMOKING.
51.4342521 GENERAL.
51.4342522 ANTI-SMOKING CAMPAIGNS.
51.4342523 DRUGS USED TO REDUCE SMOKING.
51.434253 WAYS TO REDUCE CARCINOGENICITY OF TOBACCO SMOKE.
51.4342531 GENERAL.
51.4342532 ADDITIVES WHICH REDUCE TOBACCO SMOKE CARCINOGENICITY (SODIUM NITRATE).
51.43426 GENERAL.
51.43427 CARCINOGENICITY OF UNCOMBUSTED TOBACCO (SNUFF AND CHEWING TOBACCO).
51.4335 CARCINOGENICITY OF ENVIRONMENTAL POLLUTANTS.
51.4351 GENERAL.
51.4352 ATMOSPHERIC CARCINOGENS.
SULFUR DIOXIDE.
CARCINOGENIC ACTIVITY OF AIR POLLUTANTS.
SEE ALSO: 50.62 FOR AIR POLLUTION (GENERAL).

51.43521 GENERAL: METHODS FOR SAMPLING AND ISOLATING ATMOSPHERIC CARCINOGENS.
51.43522 ATMOSPHERIC CARCINOGENS RELATED TO PETROLEUM AND AROMATIC HYDROCARBONS.
51.43523 CORRELATION OF CANCER INCIDENCE WITH AIR POLLUTION.
51.43524 CARCINOGENS IN MOTOR EXHAUSTS.
51.43525 CARCINOGENICITY OR CO-CARCINOGENICITY OF SPECIFIC AGENTS IN POLLUTED AIR.

51.4353 CARCINOGENIC COMPOUNDS IN POLLUTED WATER.

51.4354 CARCINOGENESIS RELATED TO PESTICIDES, INSECTICIDES, HERBICIDES OR WEED KILLERS, GROWTH STIMULATORS, AND OTHER CHEMICAL AGENTS AND RESIDUES IN THE ENVIRONMENT.

SEE ALSO: 51.43225 FOR CARCINOGENICITY OF SELENIUM COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).

SEE ALSO: 51.4322A5 FOR CARCINOGENICITY OF ARSENIC COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).

SEE ALSO: 51.4335 FOR CARCINOGENICITY OF FOOD ADDITIVES.

51.435401 SULFUR DIOXIDE.

51.435402 CARCINOGENIC HAZARD OF HORMONE RESIDUES IN ANIMAL FOODS.

51.436 CARCINOGENICITY OF DRUGS AND CLOSELY RELATED COMPOUNDS, DERIVATIVES, OR METABOLITES.

SEE ALSO: 51.402525 FOR INDUCTION OF LYMPPHOMAS BY ANTICONVULSANTS.

SEE ALSO: 51.47162 FOR POSSIBLE CARCINOGENIC ACTIVITY OF PROGESTATIONAL AND ANTIFERTILITY AGENTS.

51.43601 GRISEOFULVIN.

51.43602 HERBAL REMEDIES AND FOLK MEDICINES AND THEIR COMPONENTS.

51.43603 PYRROLIZIDINE ALKALOIDS (HEPATIC CARCINOGENS) IN HERBAL REMEDIES.

SEE ALSO: 51.4334 FOR OTHER TEAS AND BRES.

51.43604 IRON COMPLEXES (SOMETIMES INDUCE FIBROMAS).

51.43605 IMPERON (IRON OXTRAN COMPLEX).

51.43606 MUSCULARON.

51.43607 ISOIADIZ (RELATED TO LUNG TUMORS IN SOME ANIMALS).

51.43608 NITROFURANS.

51.43609 SALICYLATES.

51.437 CARCINOGENICITY OF MISCELLANEOUS PLANT AND ANIMAL PRODUCTS NOT INCLUDED IN PREVIOUS CATEGORIES.

SEE ALSO: 51.4334 FOR CARCINOGENICITY OF FOODS AND BEVERAGES AND RELATED AGENTS.

51.43701 CARCINOGENICITY OF MISCELLANEOUS PLANTS AND PLANT SUBSTANCES, AND MICROBIAL SUBSTANCES.

51.43702 CARCINOGENICITY OF THE BRACKEN FERN (PTERIS AQUILINA).

51.43703 CARCINOGENICITY OF MISCELLANEOUS SUBSTANCES, COMPOUNDS AND AGENTS FROM ANIMALS.

51.43704 CARCINOGENICITY OF MICROBIAL SUBSTANCES.

SEE ALSO: 51.436 FOR CARCINOGENICITY OF ANTIBIOTICS.

51.439 CARCINOGENESIS RELATED TO OTHER ENVIRONMENTAL AGENTS AND INFLUENCES.

SEE ALSO: 51.4242 FOR EFFECT OF TRAUMA, AND ENVIRONMENTAL AND PSYCHOLOGICAL STRESS.

51.44 CARCINOGENIC ACTION OF RADIATION AND OTHER ASPECTS OF RADIATION CARCINOGENESIS.

SEE ALSO: 51.45238 FOR SYNERGISTIC CARCINOGENIC ACTIVITY OF VIRUSES PLUS RADIATION AND FOR POSSIBLE ROLE OF VIRUSES IN RADIATION CARCINOGENESIS.

51.440 RADIATION-INDUCED TUMORS OF SPECIFIC TISSUES.

SEE ALSO: 51.41252 FOR PRODUCTION OF LEUKEMIA BY IRRADIATION IN ANIMALS.

SEE ALSO: 51.41262 FOR PRODUCTION OF LYMPHOMA BY IRRADIATION IN ANIMALS.

51.44001 MAMMARY GLAND CANCER INDUCTION BY IRRADIATION.

51.44002 THYROID CANCER INDUCTION BY IRRADIATION.

51.44003 SKIN CANCER INDUCTION BY IRRADIATION.

SEE ALSO: 51.443 FOR ALL ASPECTS OF SKIN CARCINOGENESIS BY ULTRA-VIOLET IRRADIATION.

51.441 GENERAL INFORMATION.
51.442 CARCINOGENIC ACTIVITY OF X-RAY.

51.4421 GENERAL.
MALIGNANT OR PREMALIGNANT CYTOLOGICAL CHANGES AFTER IRRADIATION AND EFFECT ON CHROMOSOMES.

51.4422 IN HUMANS.
51.4422 CARCINOGENIC EFFECT OF DIAGNOSTIC RADIATION OR RADIATION THERAPY.
INCREASED THYROID CANCER IN CHILDREN AFTER X-RAY FOR THYMUS ENLARGEMENT.
NEUROFIBROMATA INDUCED BY CERVICAL IRRADIATION.
SEE ALSO: 51.40252 FOR X-RAY AS A FACTOR IN PRODUCING LEUKEMIA IN HUMANS.

51.4423 IN EXPERIMENTAL ANIMALS.
51.443 CARCINOGENIC EFFECT OF ULTRAVIOLET LIGHT.
INDUCTION OF MELANOMA BY ULTRAVIOLET RADIATION OF BENIGN NEVI.
51.444 CARCINOGENIC ACTIVITY OF RADIOACTIVE ELEMENTS.
51.444A GENERAL.
51.444A1 CARCINOGENIC AND POSSIBLE CARCINOGENIC EFFECTS OF RADIOACTIVE CONTAMINATION IN THE ENVIRONMENT.
51.444CO COBALT-60.
51.444PO POLONIUM-210.
51.444RU RUTHENIUM-160.
51.444SR STRONTIUM-90.
51.444TH THALLIUM-204.
51.444U URANIUM.
SEE ALSO: 51.432305 FOR CANCER AMONG URANIUM MINERS.
POSSIBLE CARCINOGENIC EFFECTS OF I-131 THERAPY.
51.4446P P-32; INDUCTION OF LEUKEMIA BY THIS AGENT.
SEE ALSO: 51.4523803 FOR ROLE OF VIRUSES IN LEUKEMIA INDUCTION BY THIS AGENT.

51.4446RA RADIUM; THE RADIUM DIAL PAINTERS.
51.445 CARCINOGENIC EFFECT OF OTHER TYPES OF RADIATION AND HIGH ENERGY PARTICLES.
51.4451 GENERAL.
51.4452 CARCINOGENICITY OF ALPHA RADIATION.
51.4453 CARCINOGENICITY OF BETA RADIATION.
51.4454 CARCINOGENICITY OF RADIATION FROM PARTICLE ACCELERATORS.

51.45 VIRAL CARCINOGENESIS AND CARCINOGENESIS ASSOCIATED WITH OTHER LIVING PATHOGENS.
SEE ALSO: 51.40162 FOR GENERAL EPIDEMIOLOGICAL STUDIES RELATED TO VIRAL CAUSATION OF CANCER (GENERAL ASPECTS).
SEE ALSO: 62.2 FOR VIROLOGY IN GENERAL.
SEE ALSO: 62.233 FOR METHODS USED TO STUDY INFECTED CELLS (ELECTRON MICROSCOPY, IMMUNOLOGICAL METHODS, FLUORESCENT ANTIBODIES, ETC.).

NOTE: 51.45A TO 51.45Z ARE USED FOR INFORMATION ABOUT CANCER VIRUSES ASSOCIATED WITH SPECIFIC ANIMALS AND ARE ARRANGED MORE-OR-LESS ALPHABETICALLY BY MAJOR EXPERIMENTAL ANIMAL.
SELECTED RNA VIRUSES AND GENERAL ASPECTS OF RNA VIRUSES ARE IN 51.452.
SELECTED DNA VIRUSES AND GENERAL ASPECTS OF DNA VIRUSES ARE IN 51.453.
CERTAIN MISCELLANEOUS AND UNCLASSIFIED VIRUSES ARE IN 51.454.

TO REDUCE THE NUMBER OF DIGITS, THE MOST IMPORTANT ANIMALS HAVE DIGITS 1 TO 6, LESS IMPORTANT HAVE 71 TO 89, AND LEAST IMPORTANT HAVE 901 TO 999 AFTER THE LETTER. THE ASSIGNMENT OF A VARIABLE NUMBER OF DIGITS IS USED ELSEWHERE (NUMBERS FOR SPECIFIC VIRUSES).

FOR EACH TYPE OF ANIMAL, SUBDIVISION 2 DEALS WITH LEUKEMIA/LYMPHOMA VIRUSES AND SUBDIVISION 3 DEALS WITH SARCOMA VIRUSES (AND SOMETIMES FIBROMA VIRUSES). OTHER TYPES OF VIRUSES ARE ASSIGNED TO OTHER DIVISIONS. IN SOME CASES, (SEE 51.45A1), FOR EXAMPLE, LETTERS FOR SPECIFIC VIRUSES ARE ADDED IMMEDIATELY AFTER THE DIGITS AND LETTERS THAT IDENTIFY THE ANIMAL.
51.45A1 AVIAN CANCER VIRUSES AND RELATED INFORMATION.
51.45A1A1 AVIAN ERYTHROBLASTOSIS OR AVIAN ERYTHROLEUCOSIS VIRUS.
51.45A1A2 EG STRAIN OF AVIAN TUMOR VIRUS.
51.45A1JI JM AND JM-V VIRUS.
51.45A1K1 MAREK'S DISEASE VIRUS AND AVIAN NEUROLYMPHOMATOSIS OR AVIAN
HEPATOLYMPHOMATOSIS (FOWL PARALYSIS; RANGE PARALYSIS; NERVOUS FORMS
OF LYMPHOID LEUKOSIS) AND LYMPHOID TUMORS INVOLVING THE OVARY AND
NERVES.
51.45A1O1 AVIAN OSTEOPTEROSIS (THICK LEG DISEASE; MARBLE BONE) DIFFUSE
OSTEOPERIOSIS (AFTER INOCULATION OF LYMPHOID/LEUKOSIS VIRUSES).
51.45A1TI T VIRUS RETICULOSIS (TVR).
51.45A1V1 AVIAN RETICULOENDOTHELIOSIS (CAUSED BY TWIEHAUS AGENT OR
RE AGENT).
51.45A11 GENERAL.
51.45A112 IMMUNOLOGICAL TESTS AND IMMUNOLOGY OF AVIAN LEUKOSIS
VIRUS IN GENERAL.
FUR INFECTION BY AVIAN LEUKOSIS VIRUSES; THE RESISTANCE-INDUCING
FACTOR TEST (RIF TEST) AND THE COMPLEMENT FIXATION TEST FOR AVIAN
LEUKOSIS VIRUSES (CFT TEST).
51.45A113 EFFECT OF SPECIFIC GENES ON GROWTH OF AVIAN LEUKOSIS COMPLEX VIRUSES;
CYTOLOGY AND PATHOLOGY OF THE DISEASE.
51.45A12 AVIAN LEUKOSIS. LYMPHOMATOSIS. MYELOBLASTOSIS AND MYELOCYTOMOSIS
VIRUSES, OTHER FOWL LYMPHOMATOSIS AND FOWL LEUKOSIS VIRUSES, AND THE
DISEASES THEY CAUSE.
51.45A13 AVIAN SARCOMA AND FIBROMA VIRUSES AND RELATED DISEASES.
SEE ALSO: 51.A11 FOR ROUS SARCOMA VIRUSES.
51.45A13B1 BT7 SARCOMA VIRUS.
51.45A13C1 COTURNIX (QUAIL) SARCOMA VIRUS.
51.45A13C2 CLAUDE'S AGENT.
51.45A13F1 FUJINAMI SARCOMA VIRUS.
51.45A13M1 MH2 UR MURRAY-BEGG ENDOTHELIOMA.
51.45A13M2 MURPHY AGENTS (K7, K10, AND F3).
51.45A13R1 RUS SARCOMA VIRUS (RSV, CHICKEN TUMOR NO. 1) AND RELATED LATENT
CHICK VIRUSES.
RIF (RESISTANCE-INDUCING FACTOR) AND RAV (ROUS-ASSOCIATED VIRUS OR
"HELPER" VIRUS).
SCHMITT-RUPPIN, BRYAN, CARR-ZILBER, HARRIS AND PRAGUE STRAINS.
ANTIBOIES AGAINST RSV IN AVIAN SERA AND IN HUMAN SERA AND THE
SERA OF OTHER ANIMALS INJECTED WITH RSV OR WITH RSV-INDUCED
TUMORS.
INHIBITION OF RSV GROWTH BY MYCOPLASMA.
RSV INFECTION OF NON-AVIAN ANIMALS.
DNA REQUIREMENT FOR RSV SYNTHESIS.
51.45A13R2 RPL-12 VIRUS (REGIONAL Poultry LabORATORY OF USDA IN EAST LANSING,
MICHIGAN).
51.45A13R1 REGIONAL Poultry LabORATORY OF USDA IN EAST LANSING,
MICHIGAN).
51.45A1381 BOVINE CANCER VIRUSES AND RELATED INFORMATION.
51.45A2 AMPHIBIAN CANCER VIRUSES AND RELATED INFORMATION.
51.45A21 GENERAL.
51.45A22 CANCER VIRUSES IN FROGS AND NEWTS.
51.45A22L1 GOODFELLOW TUMOR VIRUS AND THE TUMOR IT INDUCES AND RELATED FROG
KIDNEY VIRUSES (THE FVI AND FV2 VIRUSES).
51.45A22L2 XENOPODUS LYMPHOSARCOMA AGENT.
51.45A22L3 XENOPODUS INFECTION OF BOVINE. 
51.45A22L4 METHODS FOR INACTIVATING VIRUS-LIKE PARTICLES IN MILK.
51.45C1 CANINE CANCER VIRUSES AND RELATED INFORMATION.
51.45C12 CANINE LEUKEMIA AND LYMPHOMA VIRUSES.
51.45C13 CANINE SARCOMA VIRUSES.
SEE ALSO: 43.501152 FOR CANINE HEPATITIS.
SEE ALSO: 51.45301151 FOR CELT (AN AEODVIRUS).
51.45C132 CANINE TRANSMISSIBLE VENERAL SARCOMA TUMOR AGENT.
51.45C14 CANINE TUMORS INDUCED BY NON-CANINE VIRUSES.
CANINE TUMORS INDUCED BY INJECTION OF RSV.
51.45F1 FELINE CANCER VIRUSES AND RELATED INFORMATION.
51.45F12 FELINE LEUKEMIA AND LYMPHOMA VIRUSES.
51.45F13 FELINE SARCOMA VIRUSES.
SEE ALSO: 43.501152 FOR CANINE HEPATITIS.
SEE ALSO: 51.45301151 FOR CELT (AN AEODVIRUS).
51.45F132 FROG CANCER VIRUSES: SEE AMPHIBIAN CANCER VIRUSES.
51.45E1 FISH CANCER VIRUSES AND RELATED INFORMATION.
51.45F3 FISH CANCER VIRUSES AND RELATED INFORMATION.
51.45F31 LYMPHOCYTE "TUMOR" CELLS IN FISH.
51.45G1 GUINEA PIG CANCER VIRUSES AND RELATED INFORMATION.
51.45G12 GUINEA PIG LEUKEMIA/LYMPHOMA VIRUSES.
51.45G121 L2C/N-B LEUKEMIA OF GUINEA PIGS.
51.45G13 GUINEA PIG SARCOMA VIRUSES.
51.45G2 CANCER VIRUSES IN GERM-FREE ANIMALS (AXEMIC AND EX-AXEMIC ANIMALS).
51.45G3 GUINEA PIG LEUKEMIA/LYMPHOMA VIRUSES AND RELATED INFORMATION.
51.45G31 GROSS VIRUS (GROSS'S A STRAIN VIRUS) AND SPONTANEOUS LEUKEMIA IN AKR/J MICE.
SEE ALSO: 51.45H13G11 FOR SPONTANEOUS LEUKEMIA IN AKR/J MICE.
51.45G32 FRIEND VIRUS. EFFECT ON HEMATOPOIESIS.
PRESENCE OF "FRIEND CELLS".
ROLE OF THE SPLEEN IN THE MULTIPICATION OF FRIEND VIRUS AND IN THE PROGRESS OF THIS DISEASE.
REVERSAL OF BENEFICIAL EFFECTS OF TREATMENT (CHEMOTHERAPY. IRRADIATION, SPLEENECTOMY) BY INJECTION OF SYNGENEIC SPLEEN CELLS.
INHIBITION OF FRIEND VIRUS GROWTH BY INJECTION OF SENOA VIRUS.
INCREASED LH LEVELS IN MICE INFECTED WITH FRIEND VIRUS.
USE OF THESE LEVELS TO FOLLOW THE EFFECT OF CHEMOTHERAPEUTIC AGENTS.
SYNERGISTIC ELEVATION OF LH LEVELS TO FOLLOW THE EFFECT OF CHEMOTHERAPEUTIC AGENTS.
SEE ALSO: 51.45J12F1 FOR POLYCYTHEMIA PRODUCING VIRUS OF MICE.
51.45M12A1 AKR VIRUS AND SPONTANEOUS LEUKEMIA IN AKR/J MICE.
SEE ALSO: 51.45M13G1 FOR RELATION OF THE 4-2 (K) ALLELE TO LEUKEMIA INDUCED BY GROSS VIRUS.
51.45M12B1 BREYERE-MOLONEY VIRUS IN BALB MICE AND RELATED PATHOLOGY.
51.45M12C1 CARCINOGEN-INDUCED LEUKEMOGENIC AGENTS IN MICE.
VIRUSES IN MURINE LEUKEMIA/LYMPHOMA INDUCED BY CHEMICAL CARCINOGENS.
INDUCTION OF LEUKEMIA BY EXTRACTS FROM CHEMICALLY INDUCED TUMORS (LEUKEMIA PRODUCED BY DMBA-INDUCED MAMMARY TUMOR IN MICE).
51.45M12C2 CHLOROLEUKEMIA OR MYELOLEUKEMIA VIRUSES.
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51.45M12E1 MURINE ERYTHROBLASTOSIS VIRUS.
SEE ALSO: 51.45M12F1 FOR EFFECT ON TUMOR VIRUSES ON ERYTHROPOIESIS.
51.45M12F1 FRIEND VIRUS.
EFFECT ON HEMATOPOIESIS.
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REVERSAL OF BENEFICIAL EFFECTS OF TREATMENT (CHEMOTHERAPY. IRRADIATION, SPLEENECTOMY) BY INJECTION OF SYNGENEIC SPLEEN CELLS.
INHIBITION OF FRIEND VIRUS GROWTH BY INJECTION OF SENOA VIRUS.
INCREASED LH LEVELS IN MICE INFECTED WITH FRIEND VIRUS.
USE OF THESE LEVELS TO FOLLOW THE EFFECT OF CHEMOTHERAPEUTIC AGENTS.
SYNERGISTIC ELEVATION OF LH LEVELS TO FOLLOW THE EFFECT OF CHEMOTHERAPEUTIC AGENTS.
SEE ALSO: 51.45M12F1 FOR POLYCYTHEMIA PRODUCING VIRUS OF MICE.
51.45M12G1 GROSS VIRUS (GROSS'S A STRAIN VIRUS) AND SPONTANEOUS LEUKEMIA IN AKR MICE (AKR LEUKEMIA) AND RELATED PATHOLOGY.
SEE ALSO: 51.45M12G1 FOR RELATION OF THE 4-2 (K) ALLELE TO LEUKEMIA INDUCED BY GROSS VIRUS.
SEE ALSO: 51.45M12G1 FOR SPONTANEOUS LEUKEMIA IN AKR/J MICE.
51.45M12G1 GENERAL.
51.45M12G2 EFFECT ON THE LYMPHOID SYSTEM AND OTHER PATHOLOGY.
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51.45M12G3 FRIEND VIRUS STRAIN AND RELATED PATHOLOGY.
51.45M12G3 HLV-2 (VIRUS FROM MICE WITH LEUKEMIA INDUCED BY INJECTION OF SPLEEN EXTRACT FROM HUMAN WITH ALL)
51.45M12K1 KAPLAN VIRUS (SIMILAR TO GROSS'S; FROM X-RAY INDUCED LYMPHOSARCOMA) AND RELATED PATHOLOGY.

51.45M12L4 LACTIC DEHYDROGENASE ELEVATING AGENT (RILEY AGENT).

51.45M12L5 LP VIRUS (PRODUCES LYMPHOMAS IN MICE).

51.45M12M1 MOLONEY LEUKEMIA VIRUS AND RELATED PATHOLOGY.

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51.45M12M12 EFFECT OF MOLONEY VIRUS ON LEUKOCYTES AND LYMPH SYSTEM.

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51.45M12M12 EFFECT OF MOLONEY VIRUS ON LEUKOCYTES AND LYMPH SYSTEM.

51.45M12M1 MALOMUT-PADNOS VIRUS OR MPV.

51.45M12M13 METHODS FOR DETECTING IT BY MEASURING THE VIRUS.

51.45M12M14 MOZURENKO VIRUS (HEMOCYTOLYSIS-RETICULOSIS VIRUS).

51.45M12M2 PRIOZHINA VIRUS.

51.45M12M3 PUJMAN'S VIRUS (LA VFUB VIRUS AND LA LEUKEMIC CELL VIRUS) X-RAY-INDUCED IN C57BL, CBA, AND AKR MICE; ALSO IN VACCINIA-INJECTED MICE.

51.45M12R1 RADIATION-INDUCED LEUMOGENIC AGENTS IN MICE. VIRUSES IN MICE AFTER IRRADIATION OR RADIOACTIVE ISOTOPES (P-32). ROLE OF VIRUSES IN RADIATION-INDUCED LEUKEMIA.

51.45M12R2 RAUSCHER LEUKEMIA VIRUS AND RELATED PATHOLOGY.

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51.45M12P5 SCHWARTZ VIRUS AND RELATED PATHOLOGY.

51.45M12S2 SCHWARTZ VIRUS AND RELATED PATHOLOGY.

51.45M12T1 TENNANT VIRUS (FROM LINE I OF C58 MICE) AND BALB/TENNANT-LEUKEMIA (8/T-1) VIRUS.

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51.45M13 MURINE SARCOMA VIRUSES (MSV), INCLUDING FINKEL TYPES, HARVEY TYPES, MOLONEY TYPES, AND KIRSTEN TYPES.

51.45M14 MOUSE MAMMARY TUMOR VIRUSES.

51.45M14 MOUSE MAMMARY TUMOR AGENTS (MTA).

51.45M14 MAMMARY TUMOR INCITENT (MTI).

51.45M14 BITIND MAMMARY TUMORS (MTV).

51.45M14 GENETIC, HORMONAL, IMMUNOLOGICAL AND OTHER FACTORS INFLUENCING TUMOR DEVELOPMENT IN MTI-INFECTED MICE.

51.45M14 A-TYPE AND B-TYPE PARTICLES IN MAMMARY TUMORS AND THEIR RELATION TO EACH OTHER.

51.45M14 MAMMARY TUMOR VIRUSES IN MILK.

51.45M14 INDUCTION OF MOUSE MAMMARY TUMORS BY VIRUSES ISOLATED FROM spontaneous LEUKEMIA IN C58/J.

51.45M14 USE OF MICROINJECTION TECHNIQUES FOR DETECTION OF MAMMARY TUMOR VIRUSES.
51.45M15 POLYCYTHEMIA-PRODUCING VIRUS OF MICE (MURINE POLYCYTHEMIA VIRUS) AND RELATED SPLEEN TUMORS.
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51.45M2 MONKEY CANCER VIRUSES AND RELATED INFORMATION.
51.45M21 GENERAL.
51.45M22 MONKEY LEUKEMIA/LYMPHOMA VIRUSES.
51.45M23 MONKEY SARCOMA AND FIBROMA VIRUSES.
51.45M231 SIMIAN VIRUS-40 (SV-40) AND OTHER ONCOGENIC SIMIAN VIRUSES.
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   SV20, SV33, SV34, SV37, SV38, SA7.
51.45M23Y1 YABA VIRUS: SUBCUTANEOUS TUMOR VIRUS OF MONKEYS.

51.45P1 PRIMATE CANCER VIRUSES AND RELATED INFORMATION.
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51.45R12 RAT LEUKEMIA/LYMPHOMA VIRUSES.
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51.45R242 MYXOMA VIRUS-INDUCED TUMORS IN RABBITS.
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51.45R5E01 ECHO VIRUSES ISOLATED FROM CANCEROUS HOSTS.
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51.45G01 HUMAN CANCER VIRUSES IN GENERAL.
51.45G011 HUMAN CANCER VIRUS TASK FORCE.
51.45G012 ROLE OF HERPES-LIKE PARTICLES IN HUMAN CANCER.
51.45G013 ROLE OF C-TYPE PARTICLES IN HUMAN CANCER.
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51.45G016 TESTS FOR PRESENCE OF CANCER VIRUSES IN HUMAN CANCER TISSUES.
51.45G0161 GENERAL.
51.45G01611 CELL LINES USED TO LOOK FOR LEUKEMIA/LYMPHOMA VIRUSES (PULVEERTAFT LINE, GRACE LINE).
51.45G0162 MARKER RESCUE EXPERIMENTS USING HUMAN CANCER TISSUE MIXED WITH INACTIVATED ONCOGENIC VIRUSES.
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51.45G02 UNIDENTIFIED VIRUSES, VIRUS-LIKE PARTICLES, AND STRUCTURES OR PHENOMENA POSSIBLY RELATED TO VIRUSES IN HUMAN PATIENTS WITH LEUKEMIA OR LYMPHOMA.
   CANCER INDUCTION IN MICE AND OTHER ANIMALS INJECTED WITH CELLS, TISSUES, AND FLUIDS FROM HUMANS WITH LEUKEMIA OR OTHER TYPES OF CANCER.
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   VIRUS-LIKE PARTICLES IN MULTINUCLEATED GIANT CELLS (POLYKARYOCYTOSIS) AND PRESENCE OF MULTINUCLEATED GIANT CELLS IN LYMPH NODE ORGAN CULTURES.
   MYXOMA-LIKE PARTICLES ASSOCIATED WITH HUMAN LEUKEMIA.
   HERPES-LIKE VIRUS PARTICLES (LEUKOVIRUS) IN CULTURED CML CELLS.
   CRYSTAL-LIKE PROTEIN INCLUSIONS.
   PRESENCE OF NON-NUCLEOLAR NUCLEAR BODIES.
   PSEUDOVIRAL PARTICLES WITHOUT RNA AND DNA.
SEE ALSO: 51.451364 HUMAN-LEUKEMIA VIRUS (ISOLATED FROM HODGKIN'S LYMPH NODES AFTER PASSAGE THROUGH MOUSE BRAIN).
51.4503 VIRUS ROLE IN ETIOLOGY OF BURKITT LYMPHOMA.
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51.4505 CANDIDATE HUMAN TUMOR VIRUSES FROM CANCERS OTHER THAN LEUKEMIA/LYMPHOMA.
EFFECT OF BURKITT LYMPHOMA VIRUS IN ANIMALS (MONKEYS).
EPIDEMIOLOGY OF THIS TUMOR AS RELATED TO VIRUS ETIOLOGY.
HERPES-LIKE VIRUSES IN NON-AFRICAN LYMPHOMAS.
HERPES-LIKE VIRUSES IN PATIENTS WITH POST-NASAL LYMPHOMA.
HERPES-LIKE VIRUSES IN EB (EPSTEIN-BURKITT) CELL LINES.
ANTIBODIES TO EB VIRUS IN PATIENTS.
TESTS FOR HERPES-LIKE VIRUSES IN CELL LINES.
SEE ALSO: 51.4524 FOR HUMAN LEUKEMIA/LYMPHOMA VIRUSES.
SEE ALSO: 62.40828 FOR HERPES-LIKE VIRUSES IN GENERAL.
SEE ALSO: 51.5253 FOR PATHOLOGY AND HISTOLOGY OF BURKITT CELL LINES.
51.4504 VIROLOGIC ASPECTS OF OTHER TYPES OF HUMAN LEUKEMIA /LYMPHOMA.
PRESENCE OF ANTI-RSV ANTIBODIES IN PATIENTS WITH JUVENILE STEM CELL LEUKEMIA (JSLC) AND OTHER CANCER.
DETECTION, ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF CANCER VIRUSES AND VIRUS-LIKE AGENTS FROM CANCER OTHER THAN LEUKEMIA/LYMPHOMA.
ATTEMPTS TO INDUCE HUMAN CANCER WITH VIRUSES OR VIRUS-LIKE AGENTS.
SEE ALSO: 51.4524 FOR HUMAN LEUKEMIA/LYMPHOMA VIRUSES.

51.451 SELECTED GENERAL TOPICS RELATED TO VIRAL CARCINOGENESIS BOTH IN VIVO AND IN VITRO.
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51.4511 GENERAL
51.45111 OPEN
51.45112 REVIEWS, REFERENCES, GENERAL INFORMATION
51.45113 BROAD STUDIES ON VIRAL CARCINOGENESIS
51.45114 EPIDEMIOLOGICAL ASPECTS OF VIRUS CARCINOGENESIS
51.45115 VIRAL CARCINOGENESIS IN AXENIC AND EXAXENIC MICE
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51.4512 IMMUNOLOGICAL ASPECTS OF VIRAL CARCINOGENESIS AND RELATED INFORMATION
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51.45121 GENERAL
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SEE ALSO: 47.7322 FOR VIRUS ANTIGENS IN GENERAL
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SEE ALSO: 51.4512311 FOR ISOLATION AND CHARACTERIZATION OF ANTIBODIES IN GENERAL
SEE ALSO: 51.455471 FOR CHANGES IN MEMBRANE COMPOSITION AFTER VIRUS INFECTION.
51.45122AD ADENOVIRUS ANTIGENS AND ADENOVIRUS-ASSOCIATED ANTIGENS AND RELATED ANTIBODIES.
51.45122FM FMR ANTIGENS (FRIEND, MOLONEY, RAUSCHER) AND RELATED ANTIBODIES.
51.45122G G ANTIGEN (GROSS) AND RELATED ANTIBODIES.
51.45122GR GRAFFI VIRUS-RELATED ANTIGENS (THE GR ANTIGENS) AND RELATED ANTIBODIES.
51.45122ML ML ANTIGEN ASSOCIATED WITH MAMMARY CANCER AND RELATED ANTIBODIES
51.45122HS MSV ANTIGENS AND RELATED ANTIBODIES.
51.45122MT MTV ANTIGENS AND RELATED ANTIBODIES.
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51.45122TL THE TL ANTIGEN (TUMOR ANTIGEN) IN CELLS INFECTED WITH DNA VIRUSES
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51.45122203 ABILITY OF VIRUS-RELATED ANTIGENS TO INDUCE RESISTANCE TO VIRUS-INDUCED TUMORS.
51.45122204 MECHANISM OF THIS RESISTANCE (ANTIBODIES, IMMUNE CELLS).
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51.45122311 ISOLATION AND CHARACTERIZATION OF VIRUS ANTIBODIES (GENERAL ASPECTS).
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51.45122322 FOR ROLE OF THE THYMUS IN RESISTANCE TO ONCOCGERIC VIRUSES AND VIRUS-INDUCED TUMORS.
51.4512233 FLUORESCENT ANTIBODIES AGAINST ONCOCGERIC VIRUSES AND VIRUS-CONTAINING CELLS.
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51.4512236 USE OF ANTIBODIES TO IMMUNIZE ANIMALS AGAINST ONCOCGERIC VIRUSES AND AGAINST VIRUS-INDUCED TUMORS.
51.451224 OTHER ASPECTS OF IMMUNE STATUS AND IMMUNE RESPONSE AS RELATED TO ONCOCGERIC VIRUSES, VIRUS-INDUCED TUMORS, AND INDUCTION OF TUMORS BY ONCOCGERIC VIRUSES.
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51.4512243 EFFECT OF THYMECTOMY OR THYMUS GRAFTS ON VIRUS-INDUCED TUMORS.
51.4512244 FOR ROLE OF THYMUS IN LEUKEMOGENESIS (IN GENERAL).
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51.45122453 INHIBITION OF VIRUS-INDUCED CANCER BY TREATING HOSTS WITH VIRUS ANTIGENS.
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51.451225 ROLE OF TRANSPLANTATION ANTIGENS AND RELATED GENES AND GENETIC LOCI, SUCH AS THE H-2(K) LOCUS TO VIRAL CARCINOGENESIS.
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51.4512252 FOR ROLE OF GENETIC FACTORS IN CANCER DEVELOPMENT (GENERAL).
51.4512253 FOR THE TL ANTIGEN AND ITS RELATION TO VIRAL LEUKEMIA.
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SEE ALSO: 51.22726 FOR CLINICAL USE OF INTERFERON.
SEE ALSO: 51.32734 FOR PRECLINICAL STUDIES OF INTERFERON THERAPY.
SEE ALSO: 62.2335 FOR INTERFERONS (GENERAL).
SEE ALSO: 62.2312 FOR MORE GENERAL ASPECTS OF INTERFERENCE.
SEE ALSO: 51.4562 FOR VIRAL TUMOR INDUCTION IN GERM-FREE (AXENIC) MICE.
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51.45132 INTERFERON INDUCTION BY VIRUSES.
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SEE ALSO: 51.45311 FOR ENHANCEMENT OF ADENOVIRUS GROWTH BY SUPERINFECTION WITH SV40.
51.45133 INTERFERON INDUCTION BY CHEMICAL AGENTS.
51.45133.01 INTERFERON INDUCTION BY POLY-IC.
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SEE ALSO: 54.155 FOR ANTIVIRAL CHEMOTHERAPY IN GENERAL.
SEE ALSO: 51.45173 FOR CORTICOSTEROIDS AND OTHER NATURAL AND SYNTHETIC HORMONES THAT PREVENT OR INHIBIT CANCER VIRUS ACTION.
51.4514 DNA- DNA.
51.4514 HEPARIN.
51.4514 MERC 6-MERCAPTOPURINE AND RELATED COMPOUNDS.
51.4514 PAOL PAOLINS (FROM MOLLUSCS).
51.4514 POLY POLYNUCLEOTIDES (NATURAL AND SYNTHETIC).
51.4514 RIFA RIFAMPICIN AND RELATED COMPOUNDS.
51.4514 RNA- RNA.
51.4515 OPEN.
51.4516 INDUCTION OF TUMORS WITH FILTERABLE AGENTS FROM TUMORS INDUCED BY CARCINOGENIC AGENTS OTHER THAN VIRUSES (CHEMICAL CARCINOGENS, RADIATION, HORMONES).
SEE ALSO: 51.481 FOR CARCINOGENIC ACTIVITY OF OTHER EXTRACTS FROM TUMORS AND TUMOR BEARING HOSTS.
ROLE OF VIRUSES IN CANCER INDUCTION BY CHEMICAL CARCINOGENS OR OTHER CARCINOGENIC AGENTS IN VIVO AND IN VITRO.
SYNERGISM AND ANTAGONISM BETWEEN VIRUSES AND OTHER CARCINOGENIC AGENTS.
SEE ALSO: 51.45133 FOR INTERFERON INDUCTION BY CHEMICAL AGENTS.
51.4516.1 GENERAL.
51.4516.2 ABILITY OF CHEMICALS (INCLUDING DRUGS) TO STIMULATE CANCER INDUCTION OR MALIGNANT TRANSFORMATION BY ONCOGENIC VIRUSES.
CARCINOGENIC ACTIVITY OF CELL-FREE FILTRATES FROM HYDROCARBON-INDUCED TUMORS.
SEE ALSO: 51.4514 FOR INHIBITION OF VIRAL CARCINOGENESIS BY CHEMICALS.
51.4516.3 ABILITY OF ONCOGENIC VIRUSES TO STIMULATE OR INHIBIT CANCER INDUCTION OR MALIGNANT TRANSFORMATION BY CHEMICAL CARCINOGENS.
SPECIFIC VIRUSES FOUND IN CHEMICALLY-INDUCED TUMORS.
51.4517 VIRUSES PLUS OTHER SELECTED AGENTS (RADIATION, HORMONES, ENDOCRINE GLANDS).
SYNERGISM AND ANTAGONISM BETWEEN THESE AGENTS DURING INDUCTION OF CANCER OR MALIGNANT TRANSFORMATION IN VIVO AND IN VITRO.
51.4517.1 GENERAL.
51.4517.2 SYNERGISM AND ANTAGONISM BETWEEN VIRUSES AND HORMONES (OR ENDOCRINE GLANDS) IN CANCER ETIOLOGY.
51.4517.3 GENERAL.
51.4517.32 EFFECT OF THE PITUITARY OR HYPOPHYSAL HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.4517.33 EFFECT OF THE THYROID AND THYROID HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.4517.34 EFFECT OF THE PARATHYROID GLAND AND RELATED HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.451735 EFFECT OF CORTICOSTEROIDS AND OTHER ADRENAL HORMONES AND ADRENAL GLAND ON TUMOR INDUCTION BY VIRUSES.
EFFECT OF METHYL PREDNISOLONE AND OTHER SYNTHETIC CORTICOID-LIKE AGENTS.

51.451736 EFFECT OF SEX GLANDS AND RELATED HORMONES (ANDROGENS AND ESTROGENS) ON TUMOR INDUCTION BY VIRUSES.

51.451737 EFFECT OF INSULIN AND OTHER PANCREATIC HORMONES ON TUMOR INDUCTION BY VIRUSES.

51.451738 EFFECT OF NEUROENDOCRINE SUBSTANCES (HISTAMINE) ON TUMOR INDUCTION BY VIRUSES.

51.451739 EFFECT OF OTHER HORMONES AND ENDOCRINE GLANDS ON TUMOR INDUCTION BY VIRUSES.

51.45174 VIRUSES PLUS RADIATION IN CANCER ETIOLOGY.
SYNERGISM AND ANTAGONISM BETWEEN THESE AGENTS.
SEE ALSO: 51.451313 FOR EFFECT OF RADIATION ON INTERFERENCE PHENOMENA.

51.45175 VIRUSES PLUS OTHER PHYSICAL CONDITIONS OR AGENTS.

51.451791 VIRUSES PLUS HEAT OR LOW TEMPERATURES.

51.4519 OTHER GENERAL TOPICS RELATED TO VIRAL CARCINOGENESIS.
SEE ALSO: 51.45436 FOR VIRUS ONCOGENESIS IN SPECIFIC TYPES OF ANIMALS.

51.451901 CARCINOGENIC ACTIVITY OF NUCLEIC ACIDS EXTRACTED FROM ONCOGENIC VIRUSES OR VIRUS-INDUCED TUMORS.
SEE ALSO: 51.481 FOR CARCINOGENIC ACTIVITY OF OTHER EXTRACTS FROM TUMORS OR TUMOR-BEARING HOSTS.

51.452 RNA TUMOR VIRUSES INCLUDING C-TYPE VIRUSES IN GENERAL.

NOTE: THIS CATEGORY IS BEING REVISED AND COULD NOT BE COMPLETED IN TIME FOR THIS PRINTING.

51.4521 GENERAL.

51.4522 CANDIDATE C-TYPE VIRUSES AND OTHER RNA TUMOR VIRUSES AND VIRUS-LIKE PARTICLES FROM ANIMAL TUMORS.
METHODS OF DETECTING THESE CANCER VIRUSES.

51.453 DNA VIRUSES IN GENERAL AND THEIR ROLE IN CANCER.
SEE ALSO: 51.451225 FOR THE T ANTIGEN AND ITS APPEARANCE IN CELLS INFECTED WITH DNA VIRUSES.

51.453A1 ADENOVIRUSES.

51.453A1 RELATION BETWEEN ADENOVIRUS AND ADENO-ASSOCIATED VIRUS (AAV) OR ADENO-SATELLITE VIRUS.
THE PARA PARTICLES: PARTICLE AIDING REPLICATION OF ADENOVIRUS.
NON-HUMAN ADENOVIRUSES.
CANINE HEPATITIS VIRUS (A DOG ADENOVIRUS).
CELO (CHICKEN LETHAL ORPHAN VIRUS).
SEE ALSO: 51.453191 SV40-ADENOVIRUS HYBRIDS.
SEE ALSO: 51.4530401 FOR DNA VIRUSES IN GENERAL.

51.453A100 GENERAL.
51.453A103 ADENOVIRUS 3.
51.453A107 ADENOVIRUS 7.
51.453A112 ADENOVIRUS 12 (HUIE STRAIN).
51.453A118 ADENOVIRUS 18 (ISTRAIN D. C.).
51.453A131 ADENOVIRUS 31.

51.453F1 FIBROMA VIRUSES OTHER THAN FOR RABBITS.
SQUIRREL AND DEER FIBROMA.
SEE ALSO: 51.453181 FOR RABBIT FIBROMA VIRUS.

51.453H1 HERPES-LIKE VIRUSES.
SEE ALSO: 51.4450 FOR HERPES-LIKE VIRUSES IN HUMAN CANCER CELLS.

51.453H2 HEPATITIS VIRUSES.
POSSIBLE ONCOGENIC EFFECT OF RUBEKER MURINE HEPATITIS VIRUS.

51.453H9 M-VIRUSES.

51.453M5 MYXOMA VIRUS-INDUCED TUMORS IN RABBITS: SEE 51.45R245.
51.453P1 POLYOMA VIRUS (SEE POLYOMA STEWARD, EDDY POLYOMA; MOUSE PAROTID TUMOR VIRUS).
TUMORS AND PATHOLOGY INDUCED BY POLYOMA VIRUS.
TEMPERATURE-SENSITIVE MUTANTS OF POLYOMA VIRUS.

51.453P2 PAPILLOMA VIRUSES IN SPECIES OTHER THAN RABBITS.
SEE ALSO: 51.45312 FOR RABBIT PAPILLOMA.
SEE ALSO: 51.45311 FOR WART VIRUSES.
51.453P281 BOVINE PAPILLOMATOSIS.
51.453P281 CANINE PAPILLOMATOSIS.
51.453P281 EQUINE PAPILLOMATOSIS.
51.453P261 PAPILLOMATOSIS OF CHAMOIS AND GOATS.
51.453P21 GENITAL PAPILLOMA OF PIGS.
51.453P21 GENERAL INFORMATION ON PAPILLOMA VIRUSES.
51.453R2 RILEY VIRUS OR LACTIC DEHYDROGENASE-ELEVATING VIRUS OR LOV (CARRIED ALONG DURING PROPAGATION OF MOUSE TUMORS). SEE ALSO: 51.45232 FOR SYNERGISTIC INCREASE IN LDH LEVELS IN MICE INFECTED WITH BOTH LDH VIRUS AND FRIEND VIRUS.
51.453S1 SALIVARY GLAND VIRUS (SGV) (POSSIBLY ONCOGENIC).
51.453S3 SHOPE FIBROMA VIRUS: SEE 51.45R245 FOR ALL INFORMATION.
51.453W1 WART VIRUSES (INCLUDING BIVINS' VIRUS). INFECTIOUS WARTS IN MAN (VERRUCA VULGARIS, MYRMECIA, HUMAN PAPILLOMA, COMMON WART, CONDYLOMA). REGRESSION OF WARTS FROM INJECTION OF VACCINIA VIRUS AND OTHER WART VACCINES. SEE ALSO: 51.453P2 FOR PAPILLOMA VIRUSES.
51.454 SELECTED HOST-VIRUS-TUMOR INTERRELATIONSHIPS IN VIVO. SEE ALSO: 51.454 FOR IN VITRO INTERRELATIONSHIPS. SEE ALSO: 51.4512 FOR IMMUNOLOGICAL ASPECTS.
51.4541 GENERAL.
51.4542 CYTOLOGICAL AND FINE STRUCTURE STUDIES OF CELLS FROM HUMANS AND ANIMALS INFECTED WITH ONCOGENIC VIRUSES. SEE ALSO: 51.4523 FOR VIRUS INCLUSIONS, BODIES AND THEIR PROPERTIES. SEE ALSO: 51.4552 FOR CYTOLOGY OF CULTURED CELLS INFECTED WITH ONCOGENIC VIRUSES. SEE ALSO: 51.4533 AND 51.4534 FOR SEARCHES FOR CANDIDATE TUMOR VIRUSES.
51.45421 GENERAL.
51.45422 ELECTRON MICROSCOPIC AND FINE STRUCTURE STUDIES.
51.45423 LIGHT MICROSCOPY AND HISTOCHEMICAL STUDIES.
51.45424 EFFECT OF VIRUS ON CHROMOSOMES (IN VIVO).) 51.4543 NON-IMMUNOLOGICAL ENDOGENOUS FACTORS AFFECTING TUMOR INDUCTION BY ONCOGENIC VIRUSES. SEE ALSO: 51.4512 FOR IMMUNOLOGICAL ASPECTS OF HOST-TUMOR INTERRELATIONS. SEE ALSO: 51.4542 FOR VIRAL CARCINOMAGENESIS IN GERM-FREE ANIMALS (AXENIC MICE). SEE ALSO: 51.4553 FOR INTERFERON ROLE IN VIRUS-INDUCED CANCER.
51.4544 PHYSIOLOGY AND BIOCHEMISTRY OF ANIMALS INFECTED WITH ONCOGENIC VIRUSES. NON-ONCOGENIC EFFECTS OF ONCOGENIC VIRUSES ON SPECIFIC TISSUES. SEE ALSO: 51.554 FOR EFFECT OF ONCOGENIC VIRUSES ON BIOCHEMISTRY OF CELLS AND TISSUES (CULTURED IN VITRO OR FROM INFECTED ANIMALS).
51.45441 GENERAL.
NOTE: THE FOLLOWING CATEGORIES DEAL WITH THE EFFECT OF ONCOGENIC VIRUSES ON SPECIFIC TISSUES.
51.454425 EFFECT ON LEUCOCYTES AND LYMPHATIC SYSTEM. SEE ALSO: 51.451224 FOR THYMUS LEUKEMIA.
51.454426 EFFECT ON BLOOD AND ERYTHROPOIESIS. POLYCYTHEMIA PRODUCED BY CANCER VIRUS. RESPONSE OF THE ERYTHROPOIETIC SYSTEM TO INFECTION BY ONCOGENIC VIRUSES. SEE ALSO: 51.453163 FOR POLYCYTHEMIA-INDUCING VIRUS. SEE ALSO: 51.452244 FOR AVIAN ERYTHROBLASTOSIS VIRUS.
51.454452 EFFECT ON LUNGS. STIMULATION OF ERYTHROPOIESIS BY RAUSCHER AND FRIEND VIRUS AND POLYCYTHEMIA VIRUSES.
51.454442 EFFECT ON KIDNEY. RENAL LESIONS PRODUCED BY CANCER VIRUSES (POLYCYTHEMIA-INDUCING VIRUS AND RAUSCHER VIRUS).
51.454442 EFFECT ON LUNGS.
51.4545 NATURE OF THE INFECTIOUS PROCESS.
51.45451 GENERAL.
51.45452 MECHANISM OF INFECTION AND TRANSMISSION OF TUMOR VIRUSES.
51.454521 GENERAL.
51.454522 AIR-BORNE TRANSMISSION.
51.454523 TRANSMISSION THROUGH DIRECT CONTACT OR VIA FECES.
51.454524 TRANSMISSION VIA INSECT VECTORS.
ROLE OF MOSQUITOS IN TUMOR TRANSMISSION.
DIFFERENTIATION BETWEEN TRANSFER OF VIRUSES AND TRANSFER OF TUMOR
CELLS.
SEE ALSO: 51.525422 FOR TRANSMISSION OF BURKITT LYMPHOMA.
51.454523 TRANSMISSION FROM PARENT TO OFFSPRING.
TRANSMISSION OF VIRUSES TO EMBRYOS.
51.454526 VIA MILK; ISOLATION OF VIRUSES FROM MILK.
SEE ALSO: 51.45313 FOR ALL INFECTIOUS TRANSMISSION OF MTA VIA MILK.
51.454525 TRANSMISSION FROM PARENT TO OFFSPRING.
TRANSMISSION OF VIRUSES TO EMBRYOS.
51.454527 RECOVERY OF VIRUSES FROM INFECTED HOSTS.
DISTRIBUTION OF VIRUSES IN THE BODY.
LOCALIZATION IN SPECIFIC TISSUES.
51.45453 VIRUS CONTENT OF TUMORS INDUCED BY VIRUS.
LENGTH OF THE INDUCTION PERIOD.
51.45456 RATE OF CLEARANCE OF INJECTED VIRUSES.
51.45457 RECOVERY OF VIRUSES FROM INFECTED HOSTS.
51.45458 DISTRIBUTION OF VIRUSES IN THE BODY.
LOCALIZATION IN SPECIFIC TISSUES.
51.4546 VIRUS-INDUCED TUMORS IN SPECIFIC ANIMALS.
51.454601 GENERAL.
51.455 SELECTED HOST-VIRUS-TUMOR INTERRELATION IN VITRO.
51.4550 GENERAL.
51.45501 OPEN.
51.45502 CELL LINES DERIVED FROM VIRUS-INDUCED TUMORS OR OTHER VIRUS-INFECTED
CELL LINES.
51.4551 MALIGNANT TRANSFORMATION OF CULTURED CELLS BY ONCOGENIC VIRUSES.
RELATED CHANGES IN MORPHOLOGY, MITOSIS, GLYCOLYSIS, CELL PROLIFERATION AND
CONTACT INHIBITION.
CHANGES IN MITOCHONDRIA, MICROSOMES, MEMBRANES, AND LYSOSOMES AS RELATED TO
TRANSFORMATION.
GROWTH OF TRANSFORMED CELLS WHEN INJECTED INTO ANIMALS.
SEE ALSO: 51.5112 FOR MALIGNANT TRANSFORMATION, GENERAL.
51.4552 CYTOLOGICAL AND FINE STRUCTURE STUDIES OF CULTURED CELLS INFECTED WITH
ONCOGENIC VIRUSES.
SEE ALSO: 51.4542 FOR CYTOLOGICAL STUDIES OF CELLS FROM ANIMALS INFECTED WITH
ONCOGENIC VIRUSES.
51.45521 GENERAL; CLONES DERIVED FROM VIRUS-INFECTED CELLS.
51.45522 CHROMOSOME ALTERATIONS AND DAMAGE INDUCED BY VIRUSES.
51.45523 CHROMOSOME ABERRATIONS INDUCED BY SCHMIDT-RUPPIN VIRUS AND ADENOVIRUSES.
IMMUNOLOGICAL STUDIES OF CULTURED VIRUS-INFECTED CELLS.
51.45524 MISCELLANEOUS PHENOMENA IN VIRUS INFECTED CELLS.
51.45525 MULTINUCLEATION.
51.45526 VIRUS INCLUSION BODIES AND THEIR PROPERTIES.
COLONY SIZE AND OTHER COLONY CHARACTERISTICS AND GROSS CELL
MORPHOLOGY AND CYTOLOGY.
51.45527 CYTOPATHIC EFFECTS.
51.4553 MECHANISM OF MALIGNANT TRANSFORMATION OF CELLS BY ONCOGENIC VIRUSES (IN
VITRO).
51.4554 MECHANISM OF ONCOGENIC VIRUS REPLICATION AND RELATED CELL BIOCHEMISTRY,
CELL BIOLOGY, AND VIRAL BIOCHEMISTRY.
SEE ALSO: 62.23 FOR MECHANISM OF VIRAL REPLICATION IN GENERAL.
SEE ALSO: 51.4545 FOR PHYSIOLOGY OF ANIMALS INFECTED WITH ONCOGENIC
Viruses (Non-Oncoenic Effect of Viruses on the Host).
SEE ALSO: 51.4552 FOR EFFECT OF ONCOGENIC VIRUSES ON THE MORPHOLOGY AND
CYTOLOGY OF INFECTED CELLS.
SEE ALSO: 51.4512 FOR IMMUNOLOGICAL CHANGES IN INFECTED CELLS.
51.45540 GENERAL.
51.45541 EFFECT ON ENZYMES AND METABOLISM RELATED TO NUCLEIC ACID.
SEE ALSO: 51.4536 FOR TUMOR INDUCTION BY ISOLATED NUCLEIC ACIDS FROM
ONCOGENIC VIRUSES OR INFECTED CELLS.
51.4554101 GENERAL.
51.4554102 PROPERTIES OF NUCLEIC ACIDS FROM VIRUS-INFECTED CELLS.
51.4554103 PRESENCE OF VIRAL GENES OR VIRUS-SPECIFIC NUCLEIC ACIDS.
51.4554104 ALTERED OR INHIBITED NUCLEIC ACID SYNTHESIS IN INFECTED CELLS.
51.4554105 POSSIBLE ROLE OF HISTONE IN ALTERING NUCLEIC ACID AND NUCLEIC ACID
METABOLISM IN INFECTED CELLS.
51.4554106 SYNTHESIS OF VIRUS NUCLEIC ACID IN INFECTED CELLS.
51.4554107 EFFECT OF VIRUSES ON M ETHYLATION OF RNA.
51.4554108 GENERAL.
51.455412 DNA SYNTHESIS.
51.455413 RNA SYNTHESIS.
51.45542 ENZYMES AND METABOLISM RELATED TO AMINO ACIDS AND PROTEINS.
ARGINASE INDUCTION BY THE SHOPE VIRUS.
SYNTHESIS OF V PROTEIN IN INFECTED CELLS.
LOW ARGinine AND HIGH CITRULLINE IN POLYOMA VIRUS-INFECTED CELLS.
51.4553 ENZYMES AND METABOLISM RELATED TO LIPIDS.
- SYNTHESIS OF VIRUS LIPID IN INFECTED CELLS.
- ENZYMES AND METABOLISM RELATED TO CARBOHYDRATES, GLYCOLYSIS, AND THE KREBS CYCLE.
- CARBOHYDRATES OF ONCOGENIC VIRUSES.
- ENZYMES AND METABOLISM RELATED TO VITAMINS.
- OTHER ENZYMES AND METABOLISM.
- EFFECT OF VIRUSES ON OTHER ASPECTS OF CELL PHYSIOLOGY.
- EFFECT ON CONTACT INHIBITION, CELL MEMBRANES AND MEMBRANE PROPERTIES.
- CHANGES IN BIOCHEMISTRY (GLYCOLIPIDS, GLYCOPROTEINS, ETC.) OF CELL MEMBRANES AFTER VIRUS INFECTIONS AND VIRUS-INDUCED TRANSFORMATION.

51.4555 OTHER ASPECTS OF ONCOGENIC VIRUS REPRODUCTION NOT INCLUDED ABOVE.
- GENERAL.
- ADSORPTION OF CANCER VIRUSES TO HOST CELLS AND PENETRATION.
- PENETRATION OF VIRUSES THROUGH CELL MEMBRANES.
- ASSEMBLY OF VIRAL SUB-UNITS AND FORMATION OF CANCER VIRUSES INSIDE HOST CELLS.
- RELEASE OF CANCER VIRUSES FROM CELLS.
- NATURE AND MECHANISM OF BUDDING OF ONCOGENIC VIRUSES FROM CELL MEMBRANES.
- NATURE AND MECHANISM OF CELL LYSIS BY ONCOGENIC VIRUSES.
- REACTIVATION OF HEAT-INACTIVATED VIRUS.
- METHODS FOR DEMONSTRATING INFECTION OF CELLS WITH ONCOGENIC VIRUSES.
- USE OF ELECTRON MICROSCOPY.
- IMMUNOFLUORESCENCE.
- USE OF INTERFERENCE PHENOMENA BY SUPERINFECTION WITH OTHER VIRUSES (HSV OR HSV).
- USE OF MARKER RESCUE AND OTHER GENETIC RECOMBINATION EXPERIMENTS.
- METHODS FOR INACTIVATING THE ONCOGENIC VIRUSES AND RELATED BIOHAZARDS.
- METHODS FOR INDUCING LATENT VIRUSES.

51.456 STUDIES OF ISOLATED ONCOGENIC VIRUSES (GENERAL).
- SEE ALSO: 51.4501 TO 51.4526 FOR SPECIFIC VIRUSES.
- SEE ALSO: 62.2 FOR MORE GENERAL STUDIES ON VIRUSES.

51.4561 MORPHOLOGY AND PHYSICAL PROPERTIES.
- NUCLEIC ACIDS, NUCLEOTIDES, NUCLEASES, AND OTHER NA-RELATED COMPONENTS OF ONCOGENIC VIRUSES.
- PROTEINS, PEPTIDES, AND AMINO ACIDS OF ONCOGENIC VIRUSES.
- LIPIDS OF ONCOGENIC VIRUSES.
- CARBOHYDRATES OF ONCOGENIC VIRUSES.
- ENZYMES OF ONCOGENIC VIRUSES.

51.4562 METHODS OF INACTIVATING THE ONCOGENIC VIRUSES AND RELATED BIOHAZARDS.
- CONTROL PROCEDURES AND VIRUS ISOLATION FACILITIES FOR ONCOGENIC VIRUSES.
- EFFECT OF HEAT, ULTRAVIOLET LIGHT, PH, TRYPsin, FORMALIN.
- SEE ALSO: 47.7232 FOR INACTIVATION OF VIRUSES FOR VACCINE PREPARATION.

51.457 METHODS, RESOURCES, AND FACILITIES RELATED TO ONCOGENIC VIRUSES.
- GENERAL.
- TUMOR VIRUS COLLECTIONS, DEPOSITORIES, AND BANKS.
- METHODS FOR GROWTH AND ISOLATION OF ONCOGENIC VIRUSES.
- SEE ALSO: 62.201 FOR MOST METHODS UNLESS THEY SPECIFICALLY APPLY TO ONCOGENIC VIRUSES.

51.4571 GENERAL.
- TISSUE CULTURE LINES AND METHODS USED FOR ONCOGENIC VIRUSES.
- METHODS OF KEEPING ANIMALS USED FOR VIRUS EXPERIMENTS.
- ANIMAL FACILITIES IN GENERAL.
- ISOLATION: CAGES.
- HOLING FACILITIES AND RELATED BIOHAZARD CONTROL.
51.45752 VIRUS-FREE ANIMALS; VIRUS-FREE CHICKENS.
51.458 NON-VIRAL MICROBIAL ETIOLOGY OF CANCER.
RELATION OF CANCER TO CONTAGIOUS DISEASES AND INFESTATIONS.
51.4581 GENERAL.
51.4582 INCIDENCE AND CAUSE OF CANCER IN GERU FREE ANIMALS.
SEE ALSO: 51.40 FOR EPIDEMIOLOGIC STUDIES RELATING CANCER TO DISEASES CAUSED BY MICROORGANISMS.
51.4583 BACTERIOPHAGE AND UNIDENTIFIED VIRUS-LIKE AGENTS (VIRIDI) AS POSSIBLE ONCOGENIC AGENTS.
51.4584 BACTERIA AS POSSIBLE ONCOGENIC AGENTS.
ISOLATION AND PROPERTIES OF BACTERIA (MOSTLY ACID-FAST MYCOBACTERIA) FOUND IN TUMORS.
51.4585 PPLO (MYCOPLASMA) AS POSSIBLE ONCOGENIC AGENTS.
CHROMOSOME BREAKAGE INDUCED BY PPLO.
SEE ALSO: 51.06 FOR ALL STUDIES ON BACTERIAL PRODUCTION OF PLANT TUMORS (BY AGROBACTERIUM TUMEFACIENS, FOR EXAMPLE).
51.45851 GENERAL.
51.45852 ISOLATION OF PPLO FROM PATIENTS AND ANIMALS WITH CANCER.
51.45853 SPECIFIC STRAINS OF PPLO.
MYCOPLASMA MERGENHAGEN (STRAIN B80).
51.4586 STUDIES OF OTHER NEAR-BACTERIA (ACTINOMYCETES, ETC.), UNIDENTIFIED BACTERIA-LIKE AGENTS, RICKETTSIA, AND MISCELLANEOUS PLEOMORPHIC ORGANISMS AS POSSIBLE ONCOGENIC AGENTS.
51.4587 CANCER CAUSED BY FUNGAL INFECTIONS.
CARCINOGENICITY OF EXTRACTS OF CANDIDA PARAPSILOSIS.
SEE ALSO: 51.45332 FOR CARCINOGENICITY OF FUNGI CONTAMINATED FOOD.
51.4588 STUDIES OF OTHER PARASITES AS POSSIBLE ONCOGENIC AGENTS: STUDIES ON SCHISTOSOMES.
SEE ALSO: 51.4043 FOR RELATION OF SCHISTOSOMIASIS (BILHARZIASIS) TO BLADDER CANCER.
51.458801 GENERAL.
51.458802 CARCINOGENICITY OF SCHISTOSOMES AND SCHISTOSOMAL PRODUCTS.
51.458803 PRODUCTION OF ASCITES AND SPLENOMEGALY IN MICE BY MICROSPORIDIA (PROTOZOA) NOSEMA ASCITICA.
51.459 OTHER MICROBES AS POSSIBLE ONCOGENIC AGENTS.
51.46 CARCINOGENIC ORGANIC CHEMICALS: CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.4324 FOR INDUSTRIAL CARCINOGENS INCLUDING THOSE IN SELECTED ORGANIC CHEMICAL INDUSTRIES.
SEE ALSO: 51.4322 FOR CARCINOGENIC ACTIVITY OF INORGANIC CHEMICALS.
SEE ALSO: 51.42 (COCARCINOGENESIS) FOR COMPOUNDS WHICH STIMULATE CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.41 FOR CHEMICAL CARCINOGENESIS OF SPECIFIC ORGANS AND TISSUES IN ANIMALS.
51.46AA41 AAF (2-ACETYLAMINO-FLUORENE OR 2-ACETAMIDO-FLUORENE D.R N-2-FLUORENYLACETANIDE).
51.46AA411 AAF, 2-TRIFLUOROE-
51.46AA412 AAF ANALOGS.
51.46AA41201 N-HYDROXY-AAF.
51.46AA41202 N-ACETOXY-AAF.
N-ACETOXY-2-ACETYL-AMINO-FLUORINE, N-ACETOXY-N-2-FLUORENYLACETANIDE.
51.46AA41203 COPPER CHELATED OF N-HYDROXY-2-AAF.
51.46AC4 Aacenaphtheno, 5-AMINO-
51.46AC4 ACENA ACENAPHTHEN, 5-NITRO.
51.46AC4 ACETA ACETAMIDE, N-METHYL-5-NITROSO-
51.46AC4 ACTH- ACTH.
51.46AC4 ACTIN ACTINOMICIN O.
X 51.46AC4 BDF- 2-H-3-AABF: SEE DIBENZOFURAN, 2-HETHOXY-3-AMINO-
51.46AE4 PFLAT APLATOXINS.
51.46AE4 FLATI FLATOXIN B1.
51.46AE4 LUMI ALUMINUM DEXTAN.
51.46AE4 AM-AZ AMINOAZOBENZENE, N-BENZYLQXY-N-METHYL-4-
51.46AE4 AM-Z 0-AZANIOAZOTOLUENE (4-AMINO-2,3-DIMETHYLAZOBENZENE).
51.46AE4 AM-ZI 4-AMINO-BIPHENYL AND ITS DERIVATIVES (4-ACETYLAMINO-BIPHENYL, 2-AMINODIPHENYLENE OXIDE, AND 3,2'-DIMETHYL-4-AMINODIPHENYL).
51.46AE4 PH AMINOAZINE.
51.46AM-SI 4-AMINOSTILBENE, AND ITS DERIVATIVES (4-ACETYLAMINOSTILBENE).
51.46AM-TK 3-AMINO-1,2,4-TRIAZOLE (3-AT).
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51.46 ETHYL ETHYLETHANE SULFONATE.
51.46 ETHYL 1-ETHYLENEDIOXY-3,4-EPoxyCyclohexane.
51.46 FERRO FERROGENE.
51.46 FLUOR N-2-FLUORENAMINE.
51.46 FLUOR N-2-FLUORENYL-DIACETAMIDE.
51.46 FPHTH FPHTHA (N-2-FLUORENYL-PHTHALIC ACID).
51.46 FURAC FURACIN (5-NITRO-2-FURALDEHYDE SEMICARBAZONE).
51.46 FURUI FURUIU (NFTA, N-(4-(15-NITRO-2-FURYL)-2-THIAZOLYLYACETAMIDE).
51.46 GLYCI GLYCIDALDEHYDE.
51.46 GOLD GOLD COMPOUNDS.
51.46 GRISE GRISEOFULVIN.
51.46 GUANI GUANINE 3'-OXIDE.
51.46 HYDR1 HYDRAZINE SULFATE.
51.46 IMFER IMFERON (IRON DEXTRAN).
51.46 ISATI ISATIDINE.
51.46 ISONI ISONIAZID.
51.46 JACOB S. JACOBAEA LIN. ALKALOIDS.
51.46 KYNUR KYNURENINE, 3'-HYDROXY.
51.46 LASIO LASIOCARPINE.
51.46 LEAD LEAD COMPOUNDS.
51.46 M-ANI N-METHYLANILINE.
51.46 M-CHO 3-METHYLCHOLANTHRENE, 20-METHYLCHOLANTHRENE (MCA).
51.46 M-ETH ETHYL ALPHAA-DICHLORMETHYL- (CMEE).
51.46 M-ETH Methylene, N-NITROSODIETHYLMETHANE, N-NITROSO-N-.
51.46 M-SUL METHYLSULFONIC ACID AND ITS ESTERS (METHANE SULFONATES) AND DERIVATIVES (METHANEMETHANE SULFONATE).
51.46 N-GEN NITROGEN MUSTARD (1N2).
51.46 N-OLE NITROOLEFINS (3-NITRO-3-HEXENE).
51.46 N-QUI NITROQUINOLINE-N-OXIDES.
51.46 MERCA 6-MERCAPTO-3-N-OXIDE.
51.46 MESID MESIDINE.
51.46 METHA METHANOL; METHYLZOE- (MAN).
51.46 METHY METHYL COMPOUNDS: SEE 51.46M- AT END OF M'S.
51.46 M-K65 MK-665.
51.46 MONOC MONOCHLOROACETALDEHYDE DIETHYL ACETAL.
51.46 M-PHIP M-HIPPHENOL.
51.46 N-BIP 4-NITROBIPHENYL.
51.46 N-FLU 2-NITROFLUORENE.
51.46 N-FUR NITROFURAN DERIVATIVES.
51.46 N-GEN NITROGEN MUSTARD (HN2).
51.46 N-OLE NITROOLEFINS (3-NITRO-3-HEXENE).
51.46 N-QUI NITROQUINOLINE-N-OXIDES.
51.46 QUEL QUELENE DIAMINE.
51.46 REL RELIANCE DIAMINE.
51.46 SPI SPIROCONE.
SELECTED TOPICS

SEE ALSO: 51.46493 FOR SYNERGISTIC EFFECT OF CHEMICAL CARCINOGENS AND ONCOGENIC VIRUSES.

51.46001 GENERAL.

SEE ALSO: 51.45542 FOR EFFECT OF CHEMICAL CARCINOGENS ON VIRUSES.
51.460022 PROTEIN BINDING AND NUCLEIC ACID BINDING AND OTHER CELL BINDING
THEORIES AND EXPERIMENTS ON CARCINOGEN BINDING (GENERAL) AND
BINDING OF CARCINOGENS OTHER THAN AROMATIC HYDROCARBONS.
SEE ALSO: 51.460024 FOR PROTEIN BINDING OF AROMATIC HYDROCARBONS.
SEE ALSO: 51.460232 FOR PROTEIN BINDING OF AZO DYES.

51.460023 DELETION THEORIES: ROLE OF CARCINOGENS IN DELETING SOME CONTROLLING
FACTOR.
SEE ALSO: 51.624 FOR ENZYME LEVELS IN TUMORS.
SEE ALSO: 51.62413 FOR ABSENCE OF FEEDBACK INHIBITION OF CHOLESTEROL
BIOGENESIS AND DOCUMENTED "DELETION" OF OTHER
CONTROL MECHANISMS IN TUMORS.
SEE ALSO: 51.6234 FOR PROTEINS "DELETED" OR ABSENT FROM TUMORS.
SEE ALSO: 51.460052 FOR LOSS OF PROTEINS (THE "M" PROTEIN) IN
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51.460024 POSSIBLE ROLE OF FREE RADICALS AND OTHER MECHANISMS IN CHEMICAL
CARCINOGENESIS.

51.460024 METABOLISM OF CARCINOGENS (GENERAL).

51.460025 SELECTIVE RESISTANCE OF CANCER CELLS TO CARCINOGENS.

51.460025 MISCELLANEOUS STUDIES.

51.46003 PHYSICAL-CHEMICAL STUDIES OF CARCINOGENIC COMPOUNDS.

51.46003 ELECTRONIC STRUCTURE AND ELECTRON SPIN (PARAMAGNETIC) RESONANCE OR
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SEE ALSO: 51.4601025 FOR PHYSICAL CHEMICAL STUDIES OF AROMATIC
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51.46004 METHOD OF CHEMICAL CARCINOGENIC COMPOUNDS.

51.46004 METHOD OF CHEMICAL CARCINOGENIC COMPOUNDS.

51.46004 COMPLEX FORMATION (CHARGE TRANSFER COMPLEXES).

51.46004 PHYSICAL-CHEMICAL STUDIES OF CARCINOGENIC COMPOUNDS.

51.46004 ELECTRONIC STRUCTURE AND ELECTRON SPIN (PARAMAGNETIC) RESONANCE OR
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SEE ALSO: 51.4601025 FOR PHYSICAL CHEMICAL STUDIES OF AROMATIC
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51.46005 CARCINOGEN- HOST INTERACTIONS: CELL TRANSFORMATION
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51.46005 EFFECTS OF CHEMICAL CARCINOGENS ON TISSUE CULTURES AND METABOLISM OF
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51.46005 EFFECTS OF CHEMICAL CARCINOGENS ON TISSUE CULTURES AND METABOLISM OF
CARCINOGENS BY TISSUE CULTURE CELLS AND ORGAN CULTURE.

51.46005 CHEMICAL CARCINOGENESIS IN ORGAN CULTURE.

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51.46005 CHEMICAL CARCINOGENESIS IN ORGAN CULTURE.

51.460055 EFFECTS OF CHEMICAL CARCINOGENS ON SPECIFIC ORGAN
SYSTEMS AND TISSUES.

51.460055 EFFECTS OF CHEMICAL CARCINOGENS ON SPECIFIC ORGAN
SYSTEMS AND TISSUES.

51.460055 EFFECTS OF CHEMICAL CARCINOGENS ON SPECIFIC ORGAN
SYSTEMS AND TISSUES.

51.460055 EFFECTS OF CHEMICAL CARCINOGENS ON SPECIFIC ORGAN
SYSTEMS AND TISSUES.
EFFECT OF CHEMICAL CARCINOGENS ON NUCLEOLI AND THEIR MORPHOLOGY.
EFFECT OF CHEMICAL CARCINOGENS ON CHROMOSOMES, CHROMOSOME MORPHOLOGY, AND CHROMOSOME NUMBER.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON NUCLEI AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON MITOCHONDRIA AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON MICROSOMES AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON RIBOSOMES AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON GOLGI BODIES AND THEIR MORPHOLOGY.
EFFECT ON SPECIFIC CELLS (EFFECT ON MAST CELLS).
SEE ALSO: 51.4600606 FOR ANTICARCINOGENIC EFFECT OF ACTINOMYCIN D AND OTHER CHEMICALS THAT INTERFERE WITH NUCLEIC ACID BIOSYNTHESIS.
51.460053 EFFECT OF CHEMICAL CARCINOGENS ON THE CHEMICAL COMPOSITION, METABOLISM, AND BIOCHEMISTRY OF CELLS (GENERAL) AND RELATION OF THESE EFFECTS TO THE CARCINOGENIC PROCESS. ROLE OF THESE COMPOUNDS IN M-RNA PRODUCTION.
SEE ALSO: 51.460124 FOR EFFECT OF AROMATIC HYDROCARBONS ON CELL BIOCHEMISTRY AND METABOLISM.
51.4600530 GENERAL.
51.4600531 EFFECT ON THE PROPERTIES, METABOLISM, AND BIOCHEMISTRY OF NUCLEIC ACIDS.
  51.460053126 EFFECT OF CARCINOGENS ON DNA SYNTHESIS.
  EFFECT OF CARCINOGENS ON RNA PRODUCTION.
  BINDING OF CARCINOGENS TO DNA (DNA BINDING).
  STIMULATION OR INHIBITION OF RNA PMC BY AZO DYES AND HYDROCARBONS.
  SEE ALSO: 51.460022 FOR PROTEIN AND NUCLEIC ACID BIOCHEMISTRY AND RELATED ENZYMES.
51.4600533 EFFECT ON RNA.
  51.460053132 EFFECT OF CHEMICAL CARCINOGENS ON AMINO ACIDS AND PROTEINS AND ON AMINO ACIDS AND PROTEIN METABOLISM.
  LOSS OF THE "M" PROTEIN DURING LIVER CARCINOGENESIS.
  EFFECT OF CARCINOGENESIS ON SERUM PROTEINS.
  SEE ALSO: 51.460022 FOR PROTEIN BINDING OF CARCINOGENS.
  SEE ALSO: 51.6234 FOR PROTEINS DELETED FROM OR ABSENT FROM TUMORS.
51.4600532 EFFECT ON LIPIDS (FATS, PHOSPHO-LIPIDS, STEROIDS) AND RELATED ENZYMES AND THEIR LIPID METABOLISM.
51.4600534 EFFECT ON CARBOHYDRATES AND CARBOHYDRATE METABOLISM, INCLUDING KREBS CYCLE AND ELECTRON TRANSPORT.
51.4600535 EFFECT ON VITAMINS.
  SEE ALSO: 51.460023 FOR THE DELETION HYPOTHESES.
51.4600536 EFFECT OF CHEMICAL CARCINOGENS ON BIOCHEMISTRY, METABOLISM AND ENZYMES NOT INCLUDED ABOVE (GENERAL).
ENZYME INDUCTION OR INHIBITION OF INDUCTION BY CARCINOGEN INJECTION AND MECHANISM OF THIS INDUCTION.
DELETION OF ENZYMES.
  SEE ALSO: 51.4601024 FOR EFFECT OF AROMATIC HYDROCARBONS ON ENZYMES.
  SEE ALSO: 51.460023 FOR THE DELETION HYPOTHESIS.
51.460055 EFFECT OF CHEMICAL CARCINOGENS ON HOST IMMUNITY AND IMMUNE RESPONSE.
  INTERACTION OF CARCINOGEN WITH HOST IMMUNE MECHANISMS.
  EFFECT OF IMMUNE RESPONSE ON CHEMICAL CARCINOGENESIS.
  INCREASED SUSCEPTIBILITY TO CARCINOGENS IN THYMECTOMIZED MICE.
  LYMPH NODE RESPONSE TO CHEMICAL CARCINOGENS.
  INDUCTION OF TUMOR SPECIFIC ANTIBODIES BY CHEMICALS.
  INTERACTION OF IMMUNE RESPONSE AND CHEMICAL CARCINOGENS.
  SEE ALSO: 51.460056 FOR RELATION OF IMMUNITY TO CARCINOGENESIS IN GENERAL.
51.460056 HOST MODIFICATION OF CHEMICAL CARCINOGENS.
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  SEE ALSO: 51.46 (OTHER CLASSES) FOR METABOLISM OF SPECIFIC CARCINOGENS.
51.460057 AGENTS AND FACTORS THAT STIMULATE CHEMICAL CARCINOGENS.
51.46005701 STIMULATION OF CHEMICAL CARCINOGENS BY HORMONES OR ENDOCRINE GLAND ALTERATION.
51.46006 ANTICARCINOGENS AND OTHER EXOGENOUS AGENTS WHICH INHIBIT CHEMICAL CARCINOGENESIS.
51.4600600 GENERAL.
51.4600601 INHIBITION OF CHEMICAL CARCINOGENS BY HYDOXYLATED AROMATIC KETONES (PHENOLIC KETONES): PARA-HYDOXY PROPIOPHENONE; M-HYDOXY ACETOPHENONE; P-HYDOXY BUTYROPHENONE.
INHIBITION OF CHEMICAL CARCINOGENS BY HORMONES OR ENDOCRINE GLAND ALTERATION.
SEE ALSO: 51.42 (CO-CARCINOGENS) FOR AGENTS WHICH STIMULATE CARCINOGENESIS.
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51.46006027 TESTES AND ANDROGENS.
51.4600603 PARTIALLY SATURATED HYDROCARBONS.
DIHYDRO DBA, HEXAHYDRO DBA, PERHYDRO DBA.
51.4600604 MALEIC ANHYDRIDE.
51.4600605 CNS DRUGS (RESERPINE, CHLORPROMAZINE).
51.4600606 ANTI-CARCINOGENIC ACTION OF ACTINOMYCIN D AND OTHER COMPOUNDS USED TO INTERFERE WITH NUCLEIC ACID SYNTHESIS (NOGALAMYCIN).
51.4600607 RETINE.
SEE ALSO: 43.354181 FOR MORE GENERAL INFORMATION ABOUT RETINE.
51.4600608 ANTICARCINOGENIC EFFECT OF CHEMOTHERAPEUTIC AGENTS.
SEE ALSO: 51.3234 FOR CORRELATION OF CHEMOTHERAPEUTIC ACTIVITY WITH ANTICARCINOGENIC ACTIVITY.
51.4600609 ANTICARCINOGENIC ACTIVITY OF 2,6-DIAMINOPURINE PLUS B. PERTUSSUS.
51.4600610 INHIBITION OF SPONTANEOUS MAMMARY TUMORS IN C3H MICE BY HYDOXYLAMINE.
51.4600611 REDUCTION OF CARCINOGENICITY OF FAA BY ACETANILIDE.
51.4600612 ANTICARCINOGENIC EFFECT OF DEFICIENT DIETS AND OF VITAMINS.
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51.4600613 REDUCTION OF CARCINOGENIC ACTIVITY BY BARBITAL.
51.4600614 0-P-DOD (0-P-DICHLOOR-0-IPHENYL-DICHLOORETHANE).
51.4600615 ANTICARCINOGENIC EFFECTS OF ONE CARCINOGENIC CHEMICAL ON THE CARCINOGENIC ACTIVITY OF A DIFFERENT CHEMICAL CARCINOGEN.
51.4600616 INHIBITION OF 20-METHYL-CHOLANTHRENE-INDUCED CARCINOGENESIS BY CELL FREE EXTRACTS OF TUMORS AND STIMULATION OF CARCINOGENESIS BY CELL FREE EXTRACTS FROM CHEMICALLY-INDUCED TUMORS.
51.46007 EFFECT OF CARCINOGENS ON SPECIFIC UNUSUAL SYSTEMS.
EFFECT OF CARCINOGENS ON BACTERIA AND BACTERIAL ENZYMES.
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51.46008 EFFECT OF MULTIPLE CHEMICAL CARCINOGENIC AGENTS IN THE SAME ANIMAL.
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51.460101 GENERAL.
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51.4601011 OPEN.
51.4601012 OPEN.
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51.460102 MECHANISM OF CARCINOGENESIS BY AROMATIC HYDROCARBONS.
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51.4601022 DISTRIBUTION OF AROMATIC HYDROCARBONS BETWEEN DIFFERENT TISSUES AND ORGANS AND INTRACELLULAR DISTRIBUTION.
51.4601023 BINDING OF AROMATIC HYDROCARBONS TO MACROMOLECULES (PROTEINS AND NUCLEIC ACIDS) AND METABOLIC REACTIONS AND ENZYMES INVOLVED. REACTION OF AROMATIC HYDROCARBONS WITH SH GROUPS AND POSSIBLE ROLE OF AROMATIC HYDROCARBON PEROXIDES AND EPXIDES IN THIS REACTION. INTERCALATION OF AROMATIC HYDROCARBONS BETWEEN NUCLEIC ACID BASES. SEE ALSO: 51.460022 FOR BINDING OF CARCINOGENS (GENERAL) AND CARCINOGENS OTHER THAN AROMATIC HYDROCARBONS.

51.4601024 EFFECT OF AROMATIC HYDROCARBONS ON ENZYMES LEVELS AND ENZYME INDUCTION AND CELL METABOLISM IN TISSUES. SEE ALSO: 51.6245 FOR EFFECT ON DRUG-METABOLIZING ENZYMES IN MICROSONES. EFFECT ON AZO DYE METABOLISM AND PREVENTION OF DYE-INDUCED TUMORS. EFFECT ON NUCLEIC ACID BIOCHEMISTRY. SEE ALSO: 51.460053 FOR MECHANISM OF THE EFFECT ON ENZYMES. EFFECT ON RNA SYNTHESIS.

51.4601025 EFFECT ON CELL DIVISION AND MITOTIC RATES AND ON OTHER ASPECTS OF CELL PHYSIOLOGY. TRANSFORMATION OF NORMAL TO MALIGNANT CELLS BY AROMATIC HYDROCARBONS AND EFFECT ON CULTURED CELLS.

51.4601026 SELECTED PHYSIOLOGICAL ASPECTS.

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51.460102602 INTERACTION OF TWO OR MORE AROMATIC HYDROCARBONS WITH EACH OTHER.

51.460102603 EFFECT OF TUMOR EXTRACTS ON CARCINOGENESIS BY AROMATIC HYDROCARBONS.


51.460103 METABOLISM, METABOLITES AND DEGRADATION OF AROMATIC HYDROCARBONS. AGENTS USED TO INHIBIT AND TO STIMULATE THE METABOLISM OF AROMATIC HYDROCARBONS (LIVER TOXINS (CARBON TETRACHLORIDE)).

51.460104 SYNTHESIS OF AROMATIC HYDROCARBONS WHICH MAY BE CARCINOGENIC. HYDROXYLATION OF AROMATIC HYDROCARBONS AND OTHER DETOXICATION REACTIONS AND RELATED MICROSONAL ENZYMES.

51.460104 AGENTS THAT STIMULATE HYDROXYLATION (PHENOTHIAZINES). 51.4601043 AGENTS THAT INHIBIT HYDROXYLATION (NICKEL CARBONYL).

51.460105 AROMATIC HYDROCARBONS IN COAL TAR OR PETROLEUM OR ENVIRONMENTAL SOURCES AND WAXES.

SEE ALSO: 51.633412 FOR NUMBER OF HYDROCARBONS IN SMOKED OR BROILED FOODS. SEE ALSO: 51.4601024 FOR EFFECT OF NUMBER OF HYDROCARBONS ON AZO DYE METABOLISM.

51.46010502 NUMBER OF HYDROCARBONS IN MOTOR EXHAUST GASES AND INDUSTRIAL GASES.

51.460106 AGENTS USED TO STIMULATE AROMATIC HYDROCARBON CARCINOGENESIS.

51.46010601 GENERAL.

51.46010602 CROTON OIL AND PHORBOL ESTERS.

51.46010603 HORMONES.

51.46010604 CIGARETTE TAR.

51.46010605 SURVEYS OF AROMATIC HYDROCARBONS AND COMPARISON OF ACTIVITY TO STRUCTURE-ACTIVITY CORRELATIONS.

51.460111 1,2,5,6-DIENDZANTHACENE (DBA).

51.460112 3,4-BENZPYRENE (BP).

51.460113 3-METHYLCOLANTHRENE (20-METHYLCOLANTHRENE).

51.460115 DMBA (7,12-DIMETHYLBENZ(A)ANTHRACENE OR 9,10-DIMETHYL-1,2-BENZANTHACENE).

51.460116 3,4,9,10-DIBENZPYRENE.

51.460117 3-METHYL-1,2-DEHYDROCHOLANTHRENE.

51.460118 1,2-BENZANTHACENE.

51.4602 AZO DYES.

SEE ALSO: 51.4601024 FOR EFFECT OF NUMBER OF HYDROCARBONS ON AZO DYE METABOLISM.

SEE ALSO: 51.4601024 FOR EFFECT OF NUMBER OF HYDROCARBONS ON AZO DYE METABOLISM.

SEE ALSO: 51.4601024 FOR EFFECT OF NUMBER OF HYDROCARBONS ON AZO DYE METABOLISM.
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51.460200 REVIEWS AND BROAD GENERAL ARTICLES.
51.46020101 O-AMINOAZOTOLUGNE (4-AMINO-2',3-DIMETHYLAZOBENZENE).
51.46020201 N-BENZOXYL-N-METHYL-4-AMINOAzoBENZENE.
51.46020401 4-DIMETHYL AMINO AZO BENZENE (DAB OR PARA-DIMETHYL DAB).
51.460231 GENERAL; MECHANISM OF AZO DYE CARCINOGENESIS.
51.460232 EFFECT OF AZO DYES ON CELL CYTOLOGY, CELL DIVISION, AND DIFFERENTIATION.
51.460233 EFFECT OF AZO DYES ON CELL BIOCHEMISTRY.
51.4602330 GENERAL.
51.4602331 NUCLEIC ACIDS.
51.4602332 PROTEINS; PROTEIN BINDING OF AZO DYES AND PROTEIN DELETION BY AZO DYES.
51.4602333 LIPIDS.
51.4602334 CARBOHYDRATES (INCLUDING KREBS CYCLE AND GLYCOLYSIS).
51.4602335 VITAMINS.
51.4602337 ELECTRON TRANSPORT AND RELATED COENZYMES.
51.46024 METABOLISM OF AZO DYES.
51.46025 FACTORS WHICH AFFECT CARCINOGENESIS BY AZO DYES AND THEIR METABOLISM.
51.460251 GENERAL.
51.460252 EFFECT OF RIBOFLAVIN AND RIBOFLAVIN ANALOGS (U2112) ON AZO DYE METABOLISM.
51.460253 EFFECT OF OTHER VITAMINS AND SPECIAL DIETS.
51.460254 EFFECT OF AGENTS THAT INDUCE DRUG METABOLIZING ENZYMES (PHENOBARBITOL).
51.46026 HOST-TUMOR INTERACTIONS.
51.460261 GENERAL.
51.460262 IMMUNITY (INCLUDING ANTIGENICITY OF DYE-INDUCED TUMORS).
51.4603 AROMATIC AMINES OTHER THAN AZO DYES.
51.46031 GENERAL INFORMATION ABOUT THE CARCINOGENICITY OF AROMATIC AMINES AND MECHANISMS OF THEIR ACTION.
51.460311 REVIEWS AND BROAD GENERAL ARTICLES.
51.460312 SYNTHESIS AND TESTING OF NEW AROMATIC AMINES.
51.460313 CYTOLOGY, HISTOLOGY AND BIOCHEMICAL CHANGES ON FEEDING AROMATIC AMINES.
51.460314 AGENTS WHICH AFFECT CARCINOGENESIS BY AROMATIC AMINES (HORMONES).
51.460315 BIOCHEMICAL CHANGES CAUSED BY AROMATIC AMINES (INHIBITION OF OXYGEN UPTAKE AND RESPIRATION).
51.46032 FLUORENE DERIVATIVES.
51.4603200 GENERAL.
51.4603201 GENERAL.
51.4603202 SYNTHESIS OF DERIVATIVES.
51.4603203 METABOLISM.
51.4603204 PROTEIN AND NUCLEIC ACID BINDING TO PROTEIN #8.
51.4603205 CARCINOGENICITY OF CHELATES DERIVED FROM FLUORENE COMPOUNDS.
51.4603211 2-ACETYLAMINO-FLUORENE OR 2-ACETAMIDO-FLUORENE (AAF) OR N-2-FLUORENYL ACETAMIDE AND ITS N-HYDROXY DERIVATIVES.
51.4603211 2-ACETYLAMINO-FLUORENE OR 2-ACETAMIDO-FLUORENE (AAF) OR N-2-FLUORENYL ACETAMIDE AND ITS N-HYDROXY DERIVATIVES.
51.4603212 N-2-FLUORENYL-DIACETAMIDE.
51.4603213 N-2-FLUORENYL-PHTHALAMIC ACID (FPHTA).
51.4603214 2,7-DIAzetamido-2,7-fluorenone (2,7-FAA) (N,N-2,7-FLUORENYL-BIS-ACETAMIDE).
51.4603215 INDUCTION OF GASTRIC CANCER IN RATS WITH THIS AGENT.
51.4603216 2-TRIFLUOROACETAMINO-FLUORENE.
51.46033 NAPHTHYL AMINES.
51.460332 1-NAPHTHYLAMINE, 2-AMINO-NAPHTHYLAMINE, BETA-NAPHTHYLAMINE OR 2-AMINO-1-NAPHTHOL.
51.460333 PRODUCTION OF NAPHTHYLAMINES BY PYROLYSIS OF AMINO ACIDS.
51.460334 PRODUCTION OF NAPHTHYLAMINES BY PYROLYSIS OF AMINO ACIDS.
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51.46032 NAPHTYL HYDROXYLAMINES.
51.46034 DIPHENGLAMINES.
51.460341 BENZIDINE.
51.460342 4-AMINO-BIPHENYL AND ITS DERIVATIVES.
4-ACETYLAMINO-BIPHENYL.
2-AMINO-DIPHENYLENE OXIDE.
INDUCTION OF COLON CANCER IN RATS BY 3,2'-DIMETHYL-4-AMINO DIPHENYL.
51.460351 4-AMINO-STILBENE AND 4-ACETYLAMINO-STILBENE.
51.4603512 DIAZAAANTHRENE.
51.460352 2-41ETHOXY-3-AMINODIBENZOFURAN (2-41.-3.408F) (INDUCES BLADDER TUMORS IN RATS).
51.46035215 N-HYDROXY FLUORENYL METABOLITES.
51.46035215 N-HYDROXY FLUORENYL METABOLITES.
51.46036 MISCELLANEOUS AMINES AND EFFECT OF N-HYDROXYLATION ON THEIR CARCINOGENICITY.
51.4603601 DICYCLOHEXYL AMINE.
51.4603701 AROMATIC AMINES DERIVED FROM BENZYL COUMARIN.
51.4604 POLYFUNCTIONAL ALKYLATING AGENTS AS CARCINOGENS.
SEE ALSO: 43.363 FOR EFFECT ON CELL DIVISION.
SEE ALSO: 51.225 FOR USE IN CANCER CHEMOTHERAPY (CLINICAL).
SEE ALSO: 51.325 FOR NON-CLINICAL STUDIES OF THEIR EFFECT ON CANCER.
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51.4605 POLYFUNCTIONAL ALKYLATING AGENTS AS CARCINOGENS.
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51.4605201 URACIL MUSTARD.
51.4606 CARCINOGENICITY OF URETHAN (ETHYL CARBAMATE) AND RELATED COMPOUNDS (INCLUDING CARBAMATES IN GENERAL).
REVERSAL OF URETHAN CARCINOGENS BY OROTIC ACID AND ITS DERIVATIVES.
INDUCTION OF PAPILLOMAS, HEPATOMAS, LUNG TUMORS, LIVER TUMORS, LEUKEMIA AND LYMPOMAS BY URETHAN.
51.4607 ISONIAZID, HYDRAZINE AND DERIVATIVES OF HYDRAZINE AND SEMICARBAZIDE.
CARCINOGENIC ACTIVITY OF MIH.
INDUCTION OF LEUKEMIA AND RETICULOSARCOMAS BY HYDRAZINE.
SEE ALSO: 51.229262 FOR USE OF MIH IN TREATING HODGKINS DISEASE.
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51.4608 N-NITROSO COMPOUNDS.
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51.460801 DIMETHYL.
51.460801 DIMETHYL NITROSAMINE (N-NITROSODIMETHYLAMINE).
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51.460802 N,N-DIETHYL NITROSAMINE.
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51.460805 N,N-DIMETHYL-N-N-DINITROSO-ETHYLENEDIAMINE.
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51.460806 N,N-DIMETHYL-N,N-DINITROSO PROPYLENE DIAMINE.
PRODUCTION OF ESOPHAGEAL TUMORS BY THESE AGENTS.
51.460807 1,4-DINITROSO (PERAZINE) ESOPHAGEAL TUMORS.
51.460808 DINITROSO PENTAMETHYLENE TETRAAMINE.
51.460809 N-NITROSO-N-METHYL METHANE.
SEE ALSO: 55.52 FOR INDUCTION OF LUNG PATHOLOGY BY THIS COMPOUND.
51.4608101 N-NITROSO-N-PHENYL PHENOLINE.
51.460811 METHYL-BUTYL NITROSAMINE.
51.460812 N-NITROSO-METHYLEUREA OR METHYL-NITROSoureA.
51.4609 EPIDOXIDES, PEROXIDES AND THEIR DERIVATIVES.
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51.46092 EPIDOXIDES DERIVED FROM UNSATURATED FATTY ACIDS.
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51.46093 PRODUCTION OF TUMORS IN FEMALE MICE KEPT ON ETHYLENE OXIDE-TREATED BEDDING.
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51.51301 GENERAL.
51.5131 CYTOL METHODS FOR NUCLEIC ACIDS IN CANCER CELLS.
51.5132 CYTOL METHODS FOR PROTEINS IN CANCER CELLS.
51.5133 CYTOL METHODS FOR LIPIDS IN CANCER CELLS.
51.5134 METHODS FOR CARBOHYDRATES AND POLYSACCHARIDES AND THEIR METABOLISM.
51.5135 METHODS FOR VITAMINS.
51.5136 CYTOL METHODS FOR MINERALS AND ELEMENTS IN CANCER CELLS.
51.5137 ULTRASTRUCTURE OR FINE STRUCTURE OF TUMOR TISSUES (GENERAL).

SEE ALSO: 43.28 FOR FINE STRUCTURE STUDIES (GENERAL).
SEE ALSO: 51.52 TO 51.59 FOR FINE STRUCTURE STUDIES OF SPECIFIC TUMORS.
SEE ALSO: 51.518 FOR OTHER CANCER CYTOLYSIS.
SEE ALSO: 43.5 FOR FINE STRUCTURE OF SPECIFIC TISSUES.

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51.51402 HUMAN TUMOR CELLS IN GENERAL.
51.51403 ULTRASTRUCTURE OF CELLS INDUCING DESTRUCTION BY CHEMOTHERAPEUTIC AGENTS OR IMMUNITY OR RADIATION OR OTHER AGENTS.

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51.51411 OPEN.
51.51412 ULTRASTRUCTURE TO OTHER CYTOLYSIS OF NUCLEI AND NUCLEOLI IN CANCER CELLS.
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51.51414 ULTRASTRUCTURE AND OTHER CYTOLYSIS OF MICROSONES AND ENDOPLASMIC RETICULUM.
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51.5143 ULTRASTRUCTURE OF MUSCLE CANCER.
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51.514555 ULTRASTRUCTURE OF ENDOMETRIAL CANCER (INCLUDING CHORDROCARCINOMA AND TROPHOBLASTIC CANCER).
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51.514534 ULTRASTRUCTURE OF PROSTATE CANCER.
51.51455 ULTRASTRUCTURE OF GERM CELLS AND TERATOMAS.
51.51456 ULTRASTRUCTURE OF ENDOCRINE GLAND CANCER.
51.51457 ULTRASTRUCTURE OF ADRENAL GLAND CANCER.
51.51462 ULTRASTRUCTURE OF NERVE CANCER.
51.51465 ULTRASTRUCTURE OF BRAIN CANCER.
51.5147 ULTRASTRUCTURE OF CANCER INVOLVING THE EYES AND EARS.
51.51482 ULTRASTRUCTURE OF CONNECTIVE TISSUE CANCER AND MESENCHYME.
51.51483 ULTRASTRUCTURE OF SKIN CANCER.
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51.51511 ULTRASTRUCTURE OF BRAIN CANCER.
51.51512 ULTRASTRUCTURE OF CANCER INVOLVING THE EYES AND EARS.
51.51513 ULTRASTRUCTURE OF CONNECTIVE TISSUE CANCER AND MESENCHYME.
51.51514 ULTRASTRUCTURE OF SKIN CANCER.
51.51515 ULTRASTRUCTURE OF BONE CANCER.
51.51516 ULTRASTRUCTURE OF ADIPOSE TISSUE CANCER.
51.51517 ULTRASTRUCTURE OF INTESTINAL CANCER.
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51.515A2E1 EHRLICH ASCITES TUMORS.
51.515A2L1 LANDSCHUTZ ASCITES CELLS.
51.515A2N1 NOVIKOFF ASCITES CELLS.
51.515A211 CYTOLOGY AND HISTOLOGY OF ASCITES CELLS.
51.515A212 CONVERSION OF TUMORS TO THE ASCITES FORM.
51.515A213 CELL DIVISION AND GROWTH KINETICS OF ASCITES CELLS.
51.515B1 BENIGN TUMORS AS A CLASS.
51.515C1 CARCINOMAS.
51.515H1 HELA CELLS.
51.515L1 L-M CELLS.
51.515M1 MELANOMAS: SEE 51.5832 FOR ALL INFORMATION.
51.515M2 MYXOMAS.
51.515P1 PLASMA CELL TUMORS AS A CLASS: SEE 51.525 FOR ALL INFORMATION.
51.515S1 SARCOMAS: LIST MOST INFORMATION AS 51.5822
SEE ALSO: 51.52533 FOR RETICULAR CELL SARCOMAS.
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51.515S1S180 SARCOMA 180.
51.515S11 CYTOLOGY, HISTOLOGY, PATHOLOGY AND METHODS FOR CLASSIFICATION OF
SARCOMAS.
51.515S2 SPONTANEOUS TUMORS AS A CLASS.
51.51500 GENERAL.
51.515001 OPEN.
51.515002 CLASSIFICATION OF TUMORS AND DESCRIPTIONS AND DEFINITIONS OF CANCER
STAGES.
51.515003 TUMOR REGISTRIES AND TUMOR BANKS AND LISTS AND INVENTORIES OF TUMORS
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51.515031 GENERAL.
51.515052201 V2 CARCINOMA IN RABBITS.
51.516 SPECIFIC SUB-CELLULAR FRACTIONS OF TUMOR CELLS AND RELATED ISOLATION METHODS.
SEE ALSO: 51.437 FOR PRE-CANCEROUS PATHOLOGY OF SPECIFIC TISSUES.
SEE ALSO: 51.438 FOR MICROORGANISMS PRESENT IN TUMORS (OTHER THAN VIRUSES).
SEE ALSO: 51.45 FOR VIRUSES PRESENT IN TUMORS.
SEE ALSO: 51.46 FOR BIOCHEMISTRY OF THESE FRACTIONS.
SEE ALSO: 51.514 FOR ULTRASTRUCTURE OF TUMORS.
51.5161 TUMOR CYTOLOGY AND SUBCELLULAR STRUCTURE IN GENERAL.
51.51611 METHODS FOR ISOLATION AND SEPARATION OF TUMOR CELLS.
51.51612 ISOLATION OF SUB-CELLULAR PARTICLES FROM TUMORS (GENERAL).
51.51613 CHEMICAL COMPOSITION OF SUB-CELLULAR PARTICLES IN GENERAL.
51.5162 TUMOR CELL MEMBRANES (INCLUDING EPITHELIAL BASEMENT MEMBRANE\(EBM\)) AND
PLASMA CELL MEMBRANES) AND THEIR PROPERTIES.
SEE ALSO: 51.742406 FOR AGGLUTINATION OF INJECTED TUMOR CELLS.
SEE ALSO: 51.743407 FOR INHIBITION OF TUMOR CELL MEMBRANES.
SEE ALSO: 51.5116 FOR CLONES GROWN IN TISSUE CULTURE AND INTERACTION
BETWEEN CELLS IN VITRO.
SEE ALSO: 47.85335 FOR ANTIGENICITY OF CELL MEMBRANES.
SEE ALSO: 43.43 FOR PROPERTIES OF CELL MEMBRANES IN NON-CANCER CELLS.
SEE ALSO: 51.734 FOR INVASIVENESS OF TUMOR CELLS.
SEE ALSO: 47.3252 FOR CONTACT INTERACTIONS BETWEEN IMMUNE AND TARGET
CELLS.
SEE ALSO: 51.7332 FOR COHESIVENESS OF TUMOR CELLS.
SEE ALSO: 51.5114 FOR ROLE OF MEMBRANES IN CONTACT INHIBITION IN TUMOR
CELLS.
SEE ALSO: 51.743407 FOR SURFACE ANTIGENS OF TUMORS.
SEE ALSO: 43.43 FOR INTERACTION BETWEEN CELLS IN GENERAL.
SEE ALSO: 51.51627 FOR SPECIFIC TYPES OF MEMBRANES.
51.51621 GENERAL.
51.516211 ISOLATION OF TUMOR CELL MEMBRANES AND OTHER METHODS USED TO STUDY
TUMOR CELL MEMBRANES.
51.51622 CELL CONTACT RELATIONSHIPS OF TUMOR CELLS.
STICKINESS, ADHESIVENESS, AND COHESIVENESS OF CANCER CELLS.
SEE ALSO: 51.51162 FOR ASSOCIATION AND AGGREGATION OF CANCER CELLS
IN VITRO.
SEE ALSO: 51.7424 FOR AGGLUTINATION OF CANCER CELLS.
51.51623 SURFACE CHARGES OF TUMOR CELLS.
51.516231 GENERAL.
51.516232 ELECTROPHORETIC MOBILITY OF CANCER CELLS.
51.51624 PERMEABILITY OF TUMOR CELL MEMBRANES.
51.51625 COMPOSITION, METABOLISM, AND ENZYME CONTENT OF TUMOR CELL MEMBRANES.
51.516251 GENERAL.
51.51625 GLYCOLIPIDS OF TUMOR MEMBRANES.
51.51626 MORPHOLOGY OF TUMOR CELL MEMBRANES AND BASEMENT MEMBRANES.
51.51627 SPECIFIC TYPES OF MEMBRANES.
51.5162701 BASEMENT MEMBRANES.

51.5164 TUMOR AND SUB-CELLULAR PARTICLES IN TUMOR CYTOPLASM.
51.51640 GENERAL.
51.516401 GENERAL ASPECTS OF TUMOR CELL CYTOPLASM AND ITS ORGANIZATION AND COMPOSITION.
51.51641 TUMOR MITOCHONDRIA AND INTRAMITOCHONDRIAL BODIES.
51.51642 TUMOR MICROSONES, RIBOSOMES, POLYSOMES AND ENDOPLASMIC RETICULUM.

SEE ALSO: 51.6232 FOR STUDIES OF RIBOSOMES AND POLYRIBOSOMES AS RELATED TO PROTEIN SYNTHESIS IN TUMORS AND TUMOR-BEARING HOSTS.

51.51643 TUMOR LYSOSOMES.
51.51644 GRANULES AND PARTICLES AND INCLUSION BODIES IN TUMOR CELLS.
51.5164401 FERRITIN-LIKE GRANULES.
51.5164402 MAST CELL GRANULES.
51.5164403 MACROMOLECULAR CRYSTALS, MEGAMOLECULES, AND OTHER PARTICLES.

SEE ALSO: 51.51662 FOR EXTRACELLULAR CRYSTALS.
51.5164404 MISCELLANEOUS CYTOPLASMIC INCLUSION BODIES.
51.51645 INTRACELLULAR TUBULES.
51.51646 GOLGI APPARATUS.

51.5165 TUMOR CELL NUCLEI AND THEIR CONTENTS.
SEE ALSO: 51.5112 FOR CANCER CELL DIVISION AND MITOSIS.
SEE ALSO: 51.512 FOR TUMOR CHROMOSOMES AND CHROMOSOME ABNORMALITIES.
SEE ALSO: 51.51123 FOR MULTINUECLEATION AND ENDOREPLICATION IN CANCER CELLS.
51.51651 GENERAL.
51.516511 ISOLATION OF TUMOR CELL NUCLEI.
51.516512 FINE STRUCTURE OF TUMOR CELL NUCLEI, GENERAL.
51.516513 DEVELOPMENTAL POTENTIALITIES OF TUMOR NUCLEI AND RELATED NUCLEAR TRANSPLANTATION EXPERIMENTS.
51.516514 CYTOLOGY, HISTOLOGY, CYTOCHEMISTRY AND ULTRASTRUCTURE OF TUMOR CELL NUCLEI AND CHROMATIN.
51.516515 BIOCHEMISTRY OF TUMOR CELL NUCLEI.
51.51652 TUMOR CELL NUCLEOLI.
51.516521 GENERAL.
51.516522 MORPHOLOGY, CYTOLOGY, AND HISTOCHEMISTRY OF TUMOR CELL NUCLEOLI.
51.516523 BIOCHEMISTRY OF TUMOR CELL NUCLEUS.
51.51653 NUCLEAR SAP.
51.5166 OTHER CANCER TISSUE COMPONENTS AND RELATED PHENOMENA.
51.51661 GENERAL.
51.51662 EXTRACELLULAR CRYSTALS AND OTHER STRUCTURES OF TUMOR TISSUES.

SEE ALSO: 51.5164403 FOR INTRACELLULAR CRYSTALS.
51.51663 OTHER CANCER TISSUE COMPONENTS AND RELATED PHENOMENA.
51.51664 GENERAL CANCER CYTOLOGY NOT INCLUDED ABOVE.

SEE ALSO: 51.51513 FOR HISTOCHEMISTRY AND CYTOCHEMISTRY.
SEE ALSO: 51.514 FOR FINE STRUCTURE AND ULTRASTRUCTURE STUDIES.

51.5181 GENERAL.
51.5182 UNUSUAL ASPECTS AND STRUCTURES IN CANCER TISSUES.

SEE ALSO: 51.51644 FOR UNUSUAL GRANULES, CRYSTALS, INCLUSION BODIES, PARTICLES, ETC.
51.5183 STUDIES OF SPECIFIC CELL TYPES (MAST CELLS) IN CANCER.
51.5184 CYTOLOGY OF NORMAL CELLS AND TISSUES NEAR TUMORS AND THEIR INTERACTION WITH TUMOR CELLS.

NOTE: THE FOLLOWING CLASSES (51.52-51.59) DEAL WITH CANCER OF SPECIFIC ORGAN SYSTEMS IN MAN AND OTHER MAMMALS.

51.52 CANCER OF THE CARDIOVASCULAR, LYMPHATIC AND RETICULOENDOTHELIAL SYSTEM.
51.522 CARDIAC CANCER.
51.5221 GENERAL.
51.5222 LEIOMYOSARCOMAS OF THE HEART.
51.5223 MYXOMAS OF THE HEART.
51.524 CANCER OF THE VASCULAR SYSTEM AND RELATED TISSUES.
51.5241 GENERAL.
51.5242 ANGIOMAS, HEMANGIOMAS, AND HEMANGIOENDOTHELIOMAS.
51.5243 OPEN.
51.525 TUMORS OF THE LYMPHATIC, LYMPHOID AND RETICULOENDOTHELIAL SYSTEM: LEUKEMIAS AND LYMPHOMAS.

SEE ALSO: 51.22025 FOR CLINICAL TREATMENT OF LEUKEMIA WITH CHEMOTHERAPEUTIC AGENTS.
51.5251 GENERAL.
51.5252 HUMAN LEUKEMIA.
SEE ALSO: 51.5253 FOR HUMAN LYMPHOMAS.
SEE ALSO: 51.40252 FOR HUMAN LEUKEMIA.
SEE ALSO: 51.4525 FOR VIROLOGY OF HUMAN LEUKEMIA.
SEE ALSO: 51.7525 FOR FACTORS OF CANCER ON LEUKOCYTES.

51.5252 GENERAL.
51.52521 STUDIES OF HUMAN LEUKEMIC CELLS.
SEE ALSO: 51.47541 FOR EFFECT OF LEUKOCYTES AND OTHER RETICULO-ENDOTHELIAL CELLS ON CANCER CELLS.
SEE ALSO: 51.75252 FOR EFFECT OF CANCER ON PROPERTIES OF LEUKOCYTES AND OTHER RETICULO-ENDOTHELIAL CELLS.

51.52522 IN VIVO STUDIES OF HUMAN LEUKEMIC CELLS (GENERAL).
SEE ALSO: 51.75252 FOR EFFECTS OF TUMORS ON NORMAL LEUKOCYTES.
SEE ALSO: 51.525221 FOR STUDIES OF NORMAL LEUKOCYTE KINETICS.

51.525221 GENERAL.
51.5252211 ISOLATION OF LEUKEMIC CELLS.
51.5252212 METHODS OF CULTURING HUMAN LEUKEMIC CELLS.
SEE ALSO: 53.25 FOR TISSUE CULTURE OF NORMAL LYMPHOCYTES.
51.5252213 ASSAYS FOR LEUKEMIC CELLS.
51.52522131 SPLEEN COLONY ASSAY METHODS.
51.525222 IN VIVO STUDIES OF HUMAN LEUKEMIC CELLS (GENERAL).
SEE ALSO: 51.75252 FOR EFFECTS OF TUMORS ON NORMAL LEUKOCYTES.
SEE ALSO: 51.5252221 FOR STUDIES OF NORMAL LEUKOCYTE KINETICS.

51.525222 KINETICS OF HUMAN LEUKEMIC CELL PRODUCTION AND RATE OF LEUKEMIC CELL DIVISION.
SEE ALSO: 51.5112 FOR RATE OF TUMOR CELL DIVISION IN GENERAL.
51.5252223 INVASIVENESS OF LEUKEMIC CELLS.
51.525223 KINETICS OF HUMAN LEUKEMIC CELL DIVISION IN VITRO.
51.5252231 MEMBRANE TRANSPORT IN HUMAN LEUKEMIC CELLS.
51.5252232 PHAGOCYTOSIS BY HUMAN LEUKEMIC CELLS.
51.5252233 OTHER PROPERTIES OF HUMAN LEUKEMIC CELLS.
51.5252234 EFFECT OF VARIOUS AGENTS (PHYTOHEMAGGLUTININ) ON LEUKEMIC CELLS.
51.5252235 CHROMOSOMES OF HUMAN LEUKEMIC CELLS.
SEE ALSO: 51.512 FOR TUMOR CELL CHROMOSOMES AND CHROMOSOME ABNORMALITIES ASSOCIATED WITH CANCER IN GENERAL.

51.5252250 GENERAL.
51.52522501 THE PH1 CHROMOSOME (PHILADELPHIA CHROMOSOME).
51.52522502 DIFFICENCY OF CHROMOSOME 21 IN CHRONIC MYELOGENOUS LEUKEMIA.
51.525226 OTHER CYTOLOGICAL AND CYTOCHEMICAL STUDIES OF HUMAN LEUKEMIC CELLS.
51.5252261 GENERAL.
51.5252262 MITOCHONDRIA.
51.5252263 MICROSOMES.
51.5252264 LYSOSOMES.
51.5252265 OTHER CYTOPLASMIC STRUCTURES.
51.5252266 NUCLEI AND NUCLEOLI.
51.525227 BIOCHEMISTRY AND METABOLISM OF HUMAN LEUKEMIC CELLS.
51.5252271 NUCLEIC ACIDS, BIOCHEMISTRY AND METABOLISM.
51.5252272 PROTEIN, BIOCHEMISTRY AND METABOLISM.
51.5252273 LIPID, BIOCHEMISTRY AND METABOLISM.
51.5252274 CHO BIOCHEMISTRY AND METABOLISM (INCLUDING GLYCOLYSIS, RESPIRATION, O2 UPTAKE KREBS CYCLE).
51.5252275 VITAMINS.
51.5252277 ENERGY PRODUCTION AND STORAGE AND ELECTRON TRANSPORT.

51.5253 SPECIFIC TYPES OF HUMAN LEUKEMIA.
SEE ALSO: 51.40252653 FOR CONGENITAL LEUKEMIA.
51.52531 GENERAL.
51.525311 ACUTE LEUKEMIA IN GENERAL.
51.525312 CHRONIC LEUKEMIA IN GENERAL.
51.525313 SUB-LEUKEMIA (OR ALEUKEMIC LEUKEMIA) IN GENERAL OF GRANULOCYTIC, MONOCYTIC, OR LYMPHOCYTIC TYPES.
51.525314 COMPOUND LEUKEMIAS.
51.52532 LYMPHOCYTIC LEUKEMIAS (LYMPHATIC, LYMPHOBLASTIC, LYMPHOGENOUS, AND LYMPHOID LEUKEMIAS).
51.525321 GENERAL.
51.525322 ACUTE LYMPHOCYTIC LEUKEMIAS.
51.525323 CHRONIC LYMPHOCYTIC LEUKEMIAS.
51.525324 MYELOCYTIC OR GRANULOCYTIC LEUKEMIAS (MYELOCYTIC, EOSINOPHILIC, BASOPHILIC, AND MYELOID LEUKEMIAS) AND "MYELOSIS".
51.525231 GENERAL.
51.525232 ACUTE GRANULOCYTIC LEUKEMIA.
ACUTE MYELOGENOUS LEUKEMIA.
MYELOBLASTIC LEUKEMIA.
PROMYELOBLASTIC MYELOCYTIC MYELOSIS.
51.525234 MONOCYTIC LEUKEMIAS (MONOBLASTIC AND HISTIOCYTIC TYPES).
SEE ALSO: 51.525235 FOR NAEGELI TYPE OF MONOCYTIC LEUKEMIA.
51.525231 GENERAL: SCHILLING TYPE MONOCYTIC LEUKEMIA.
HISTIOCYTIC LEUKEMIA.
51.525234 ACUTE MONOCYTIC LEUKEMIA.
MONOBLASTIC LEUKEMIA.
51.5252341 GENERAL:
SCHILLING TYPE MONOCYTIC LEUKEMIA.
HISTIOCYTIC LEUKEMIA.
51.5252342 ACUTE MONOCYTIC LEUKEMIA.
MONOBLASTIC LEUKEMIA.
51.5252343 CHRONIC MONOCYTIC LEUKEMIA.
EFFECT OF LEUKEMIA ON HOST IMMUNITY.
51.525235 LEUKEMIAS AND RELATED CONDITIONS INVOLVING INCREASED ERYTHROCYTE
LEVELS.
SEE ALSO: 51.7526 FOR TUMOR-INDUCED ERYTHROPOIESIS.
SEE ALSO: 51.5263 FOR ERYTHEMIA (POLCYTHEMIA RUBRA, OR
POLCYTHEMIA VERA).
51.5252351 GENERAL.
51.5252352 ERYTHROLEUKEMIA (ERYTHROCYTHEMIA).
51.5252353 ERYTHREMIA MYELOSIS (D1GUGLIELMO'S DISEASE).
51.525236 OTHER LEUKEMIC CONDITIONS.
51.5252361 BASOPHILIC LEUKEMIA.
51.5252362 EOSINOPHILIC LEUKEMIA.
51.5252363 LYMPHOSARCOMA CELL LEUKEMIA (LEUKOSARCOMA OF STERNBERG).
51.5252364 GIANT CELL LEUKEMIA:
MEGAKARYOCYTIC (MEGAKARYOBLASTIC) LEUKEMIA.
MEGAKARYOCYTIC MYELOSIS.
THROMBOCYTIC LEUKEMIA.
51.5252365 PLASMA CELL LEUKEMIA (PLASMACYTIC LEUKEMIA).
51.5252366 CHLOROMA AND CHLOROLEUKEMIA.
51.5252367 MAST CELL LEUKEMIA.
51.525234 SPECIFIC EFFECTS OF LEUKEMIA ON PATIENTS.
SEE ALSO: 51.75 FOR EFFECT ON SPECIFIC TISSUES.
SEE ALSO: 51.74632 FOR DECREASED I-ANTIGEN IN LEUKEMIC PATIENTS.
SEE ALSO: 51.7525 FOR EFFECT OF TUMORS (GENERAL) ON THE RETICULO-
ENDOTHELIAL AND LYMPHATIC SYSTEM AND RELATED CELLS.
SEE ALSO: 51.76183 FOR THE "HYPOTHALAMIC SYNDROME" (OBESITY, HIRSUTISM)
IN LEUKEMIC PATIENTS.
SEE ALSO: 51.75563 FOR TESTICULAR INFILTRATION BY LEUKEMIC CELLS.
51.525241 GENERAL.
51.525242 SPLENOMEGALY IN LEUKEMIA.
51.525243 PROPERTIES OF SERUM FROM PATIENTS WITH LEUKEMIA.
STIMULATION OF MARROW-LIKE SINUSOIDAL CULTURES OF LYMPHOCYTES GROWN
IN LEUKEMIC SERUM.
51.525244 RESISTANCE TO INFECTION IN LEUKEMIC PATIENTS.
51.525245 EFFECT ON NORMAL TISSUES (MUSCLE).
51.525233 HUMAN LYMPHOMAS AND RELATED DISEASES (ACS MANUAL, 1951).
SEE ALSO: 51.4525 FOR ALL VIROLOGICAL ASPECTS.
SEE ALSO: 51.65 FOR VITAMIN B12-LIKE ACTIVITY IN SERUM OF PATIENTS WITH
LYMPHOMAS.
SEE ALSO: 51.752632 FOR STIMULATION OF HEMATOPOIETIC TISSUE BY SERUM FROM
PATIENTS WITH LEUKEMIA.
SEE ALSO: 51.5254 FOR PRELYMPHOMATOSIS.
51.525304 PRIMARY OSSEOUS LYMPHOMGRANULOMA.
51.52531 GENERAL.
51.525312 CHROMOSOMES OF HUMAN LYMPHOMAS.
51.525313 RATE OF DIVISION AND GROWTH RATE OF LYMPHOMA CELLS IN TISSUE CULTURE
AND IN VITRO.
51.52532 LYMPHOSARCOMAS.
51.525321 GENERAL.
51.525322 BURKITT'S AFRICAN LYMPHOMA.
SEE ALSO: 51.4502 FOR VIROLOGICAL ASPECTS.
51.525323 BURKITT-LIKE LYMPHOMAS (NON-AFRICAN).
51.525324 OCULAR LYMPHOMA AND LYMPHOMA OF THE ORBIT.
51.525325 LYMPHOSARCOMATOSIS.
51.525326 MYCOSIS FUNGOIDES.
51.52533 RETICULUM CELL SARCOMAS.
RETILOCYTIDS AND RETHELLOSARCOMA (SC).
GRANULOMATOUS RETILOCYTIDS.
RETILOCYSARCOMA OF BONE.
SEE ALSO: 51.52563 FOR REDUCTION OF CELL NUCE.
SEE ALSO: 51.102631 FOR REDUCTION OF CELL NUCLEIC ACID LIKE HODGSKINS
DISEASE-IN SULIFICE.
51.52534 Hodgkin's disease and closely related conditions.
Lympohcyte defects and other immune changes related to Hodgkin's disease.
Sternberg's disease (Sternberg-Reed or Reed-Sternberg cells).
Hodgkin's granuloma and paragranuloma.
Hodgkin's lymphoblastoma.
Hodgkin's lymphoma.
Lymphogranuloma and lymphogranulomatosis.
Spiegler-Fendt sarcoid.
Pel Ebstien disease.

51.52535 Plasma cell myeloma and multiple myeloma.
Bone marrow neoplasms in general.
Myelomatosis.
Multiple myeloma.
Plasmocytic myeloma.
Plasmocytic sarcoma.
Plasmacytoma.
Myelosarcoma.
Myeloma.
Kahler's disease.
See also: 51.6233 for biochemistry and properties of plasma-cell tumor, myeloma, and Bence-Jones proteins.

51.52536 Thymomas and other thymus tumors.
See also: 52.323 for myasthenia gravis and related abnormalities in patients with primary thymus tumors.

51.52537 Other lymphomas:
51.5253701 Giant follicular lymphoma (nodular lymphoma, follicular sarcoma, Brill Symer's disease).
51.5253702 Benign lymphoid polyp.
51.5253703 Compound lymphomas.
51.5253705 Transplantable human lymphomas.
51.525401 General.
51.525403 Histiocytosis X or Letterer-Siwe disease or hand-schuller-christian disease or non-lipid reticuloendotheliosis and related eosinophilic granuloma.
51.525404 Angiomatous lymphoid hamartoma (lymph node hyperplasia).
Follicular lymphoreticuloma.
Hemangiolymphoma.
Lymph node hyperplasia.
51.525405 Spleen tumors.
51.525406 Lymph node metastasis of other tumors.
51.52551 General.
51.5255102 Leukemia in cattle.
51.5255123 Immune competence of leukemic mice.
See also: 51.746 for effects of cancer on host immunity.
51.52552 Non-viral aspects of leukemia in mice.
See also: 51.4523 for all murine leukemia viruses and the diseases they induce and all aspects of viral murine leukemia.
51.525521 General.
51.525522 Strains of mice with high incidence of leukemia.
Preleukemic states in these mice.
Leukemia in c57bl mice.
Leukemia in c58 mice (the 18 line).
Leukemia in C57BL mice.
51.525523 Characteristics of leukemic animals and leukemic cells in animals.
51.5255231 General; cytological and histological studies.
51.5255232 Properties of lymphocytes in leukemic mice.
51.5255233 Effect of leukemia on mice.
Erythroleukemic reaction (increased normoblasts in spleen and blood).
Metabolic changes (serum glucose levels, effect of alloxan).
51.5255248 When thymus is directly involved.
51.52553 Non-viral aspects of leukemia in rats.
51.525535 Shay chloroma (chloroleukemia) in rats.
51.52554 Leukemia in other animals.
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51.525401 LEUKEMIA IN DOGS.
51.525407 GUINEA PIGS (LLC/HB LEUKEMIA).
51.5256 NON-VIRAL ASPECTS OF LYMPHOMA AND RELATED TYPES OF RETICULOENDOTHELIAL TUMOR CELLS OTHER THAN LEUKEMIA IN EXPERIMENTAL ANIMALS AND OTHER ANIMALS.
SEE ALSO: 51.4523 FOR ALL VIRAL ASPECTS.
SEE ALSO: 51.510253 FOR LYMPHOMA CELL LINES.
51.5256 GENERAL.
51.52561 CYTOLOGY AND HISTOLOGY OF LYMPHOMA IN ANIMALS.
51.52562 LYMPHOSARCOMA IN ANIMALS.
51.52564 PLASMA CELL TUMORS AND PLASMA CELL MYELOS IN ANIMALS.
MURINE PLASMACYTOMAS (X-5563) AND PROPERTIES OF THESE TUMORS (CRYSTALS AND RUSSELL BODIES IN THESE CELLS).
PLASMA CELL TUMOR ADJ-PC-5.
SEE ALSO: 51.41252701 FOR INOCULATION OF THIS TUMOR BY MINERAL OIL.
51.52565 MOUSE THYMOMA (IN C57 BL MICE).
ROLE OF VIRUS, IRRADIATION, URETHANE AND OTHER CHEMICAL CARCINOGENS.
51.52566 OTHER TYPES OF ANIMAL LYMPHOMAS.
51.525661 MALIGNANT LYMPHOMA IN AKR MICE.
51.525662 HAMSTER LYMPHOMAS.
51.525663 COWS.
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51.525664 IN PRIMATES.
51.526 POLYCYTHEMIA AND OTHER CANCER AND RELATED BLOOD CONDITIONS IN HUMANS AND EXPERIMENTAL ANIMALS.
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SEE ALSO: 51.4512805 FOR ERYTHROBLASTS VIRUS.
51.527 RETICULOENDOTHELIAL CELLS TUMORS.
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51.53 CANCER OF MUSCLE TISSUES: MYOMAS.
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51.531 GENERAL.
51.532 LEIOMYOMAS AND LEIOMYOSARCOMAS.
51.533 Rhabdomyosarcomas.
51.534 MYOBLASTOMAS.
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51.535 PROLIFERATIVE HYOSITIS.
51.54 CANCER OF THE KIDNEY, BLADDER, AND ASSOCIATED DUCTS AND TRACTS.
51.541 GENERAL: URINARY SYSTEM CANCER.
51.542 KIDNEY CANCER.
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SEE ALSO: 51.8432 FOR LUCKE RENAL ADENOCARCINOMA AND OTHER FROG KIDNEY TUMORS.
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51.542081 HYPERNEPHROMA.
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51.550 CANCER OF THE VISCERA, ABDOMEN, AND PERITONEAL CAVITY IN GENERAL.
51.551 CANCER OF THE EXOCRINE GLANDS.
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51.55421 CARCINOID TUMORS AND MALIGNANT CARCINOID TUMORS OF STOMACH, SMALL 
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51.5544 CANCER OF THE STOMACH (GASTRIC CANCER) OR CANCER OF STOMACH AND INTESTINE 
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51.55441 GENERAL.
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51.55451 GENERAL.
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51.5547 CANCER OF THE PANCREAS.
51.555 CANCER OF THE REPRODUCTIVE ORGANS AND RELATED TISSUES, INCLUDING TERATOMAS.
51.5551 GENERAL.
51.5552 CANCER OF THE FEMALE GONADS AND ACCESSORY SEX TISSUES.
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ARAHENOBLASTOMAS.
BILATERAL OVARIAN TUMORS.
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LIPID CELL TUMORS OF THE OVARY.
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51.555234 CANCER OF THE PLACENTA AND ENDOMETRIUM.
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51.5552343 OTHER ENDOMETRIAL CANCER.
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51.555235 CANCER OF THE OVIDUCTS AND FALLOPIAN TUBES.
51.5552351 GENERAL.
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51.55541 GENERAL.
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51.563 OPEN.
51.564 OPEN.
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CHONDROBLASTOMAS.
CHONDROBLASTOMAS.
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51.58423031 CHORDOMA (FROM PRIMITIVE NOTOCORD VERTEBRAE OF VERTEBRAL SKELETON OR SPHENOID).

51.5843 ODONTOGENIC TUMORS.
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51.585 ADIPOSE TISSUE TUMORS.
51.5851 GENERAL.
51.5852 LIPOMAS.
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51.59 CANCER OF SELECTED BODY STRUCTURES.
51.591 CANCER OF THE ORAL CAVITY AND ASSOCIATED STRUCTURES.
51.5911 GENERAL; HEAD AND NECK CANCER IN GENERAL.
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51.5912 CANCER OF THE ORAL CAVITY (LIPS, TONGUE, ORAL MUCOSA).
    51.59121 OPEN.
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51.5913 CANCER OF THE THROAT, NASAL CAVITY, PHARYNX, LARYNX, AND VOCAL CORDS.
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51.5915 CANCER OF THE FACE AND EARS.
    51.592 OPEN.
51.593 CANCER OF THE APPENDAGES (GENERAL).
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    51.59401 GENERAL.
    51.59402 METASTASIS IN LYMPH NODE.
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