

ANATOMIC PATHOLOGY

CYTOPATHOLOGY

- 1) Pelvic washing Papanicolaou stain, diagnose endosalpingiosis
- 2) Neck nodule; diagnose epidermal inclusion cyst from Papanicolaou stain
- 3) Immunostain patterns associated with mesothelioma
- 4) Cerebrospinal fluid plasma cells; multiple sclerosis
- 5) Cytologic description of creola bodies
- 6) Urothelial cells in urine; significance
- 7) Cells commonly associated with carcinoid tumor of the lung
- 8) Urine; diagnose polyomavirus
- 9) Cervicovaginal smear; diagnose low grade squamous intraepithelial lesion
- 10) Cervical lesion; diagnose high grade squamous intraepithelial lesion
- 11) Urine; high grade urothelial cell carcinoma
- 12) Diagnosis of rheumatoid disease; inflammatory serous pleural effusion
- 13) Identification of small cell carcinoma
- 14) Invasive ductal carcinoma; identification from fine needle aspiration
- 15) Gastrointestinal stromal tumor (GIST); identification from fine needle aspiration
- 16) Recognition of primitive neuroectodermal tumor
- 17) Kaposi's sarcoma; clinical presentation
- 18) Burkitt; t(8,14)
- 19) Adenocarcinoma; cerebrospinal fluid
- 20) HMB45; use for diagnosing melanoma
- 21) Knowledge of post radiation angiosarcoma
- 22) Cells of breast origin; pleural effusion
- 23) Non-small cell carcinoma; diagnose from pleural effusion
- 24) Myxoid liposarcoma; diagnose from fine needle aspirate
- 25) Quality control measures established by the CLIA'88
- 26) **Deleted**
- 27) Interpret reactive / reparative epithelium
- 28) Diagnose nodular hyperplasia; fine needle aspirate, thyroid lesion
- 29) Identify cells, suggestive of lymphoma/leukemia; cerebrospinal fluid
- 30) Identify metastatic carcinoma; cerebrospinal fluid
- 31) Identify hepatocellular carcinoma; fine needle aspirate, liver mass
- 32) Identify metastatic colonic adenocarcinoma; fine needle aspirate, liver mass
- 33) Identify granulomatous inflammation; fine needle aspirate, lung mass
- 34) Identify fungal organisms; Papanicolaou cervical smear
- 35) Diagnose squamous cell carcinoma; fine needle aspirate, lung
- 36) Diagnose adenocarcinoma; fine needle aspirate, pancreatic head lesion
- 37) Identify benign cellular changes, *Trichomonas* infection; Papanicolaou cervical smear
- 38) Diagnose pleomorphic adenoma / mixed tumor; fine needle aspirate, parotid mass
- 39) Diagnose renal cell carcinoma; fine needle aspirate, kidney mass
- 40) Diagnose adenocarcinoma; fine needle aspirate, rib mass

AUTOPSY/FORENSIC PATHOLOGY

- 41) Vitreous fluid; hyperglycemia
- 42) Identify tests to determine cause of death in a badly decomposed body
- 43) Definition of wound caused from slashing of a sharp-edged object
- 44) Identify causes of death for death certification purposes
- 45) Define adipocere
- 46) Know typical conditions of an autoerotic asphyxia death
- 47) Identify smoke and soot inhalation from posterior view of tongue, larynx
- 48) Identify cerebral contusion from fixed brain
- 49) Identify injuries from low-voltage electrocution
- 50) Identify "marbling"
- 51) Subarachnoid hemorrhage; underlying natural disease process
- 52) Chronic substance abuse; natural death
- 53) Turner syndrome; clinical characteristics
- 54) Skin cancer; arsenic
- 55) Chronic alcoholic; thiamine (vitamin B₁)
- 56) Fly eggs; identification
- 57) Parvovirus B19 infection; identification, hydrops fetalis
- 58) Identify; adrenal adenoma
- 59) Kaposi sarcoma; autopsy findings
- 60) Decomposition; pattern in blood electrolytes

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AUTOPSY/FORENSIC PATHOLOGY cont'd

- 61) Identify medical intervention
- 62) Identify glycogenated hepatic nuclei
- 63) Calcium oxalate crystals; identification in ethylene glycol poisoning
- 64) Identify cholesterol crystals; lung
- 65) Approximate the range-of-fire from gunshot wound
- 66) Acute asthmatic bronchitis; cause of death
- 67) Identify medical intervention
- 68) Coagulative necrosis with early phagocytosis of dead cells at periphery; gross identification
- 69) Identify autosplenectomy; hemoglobinopathy
- 70) Identify; blunt force trauma
- 71) Indicative of heroin use; 6-monoacetylmorphine
- 72) Identify situs inversus; infant
- 73) Identify shotgun wound; bone
- 74) Identify; congenital mole
- 75) Chain of custody; definition
- 76) Petechial hemorrhages; causes

SURGICAL PATHOLOGY

- 77) Intraductal papilloma; diagnosis
- 78) Ductal hyperplasia of the breast; risk for invasive carcinoma
- 79) Prognostic factor for invasive breast carcinoma; axillary lymph node
- 80) Inflammatory breast carcinoma; characteristics
- 81) Colposcopic biopsy; HPV 18
- 82) Immunohistochemical stain displaying nuclear staining; S100 protein
- 83) Pancreas mucinous cystic neoplasm
- 84) Liver mass; relevance of clinical history
- 85) Kidney neoplasms, renal cell carcinoma, grading of renal neoplasms
- 86) Thyroid; papillary carcinoma, tall cell variant
- 87) Duodenum, neuroendocrine neoplasm with calcospherites; somatostatin
- 88) Heart mass; atrial myxoma
- 89) Vacuolar interface change; lupus erythematosus, erythema multiforme
- 90) Liver biopsy; recognition of hepatitis B
- 91) Pulmonary Langerhans' cell histiocytosis; immunohistochemical stains
- 92) Pulmonary large cell neuroendocrine carcinomas; immunohistochemical marker
- 93) Nonspecific interstitial pneumonia; characteristics
- 94) **Deleted**
- 95) Meningioma; epithelial membrane antigen immunoreactivity
- 96) Diagnose papillary endolymphatic sac tumor
- 97) Diagnose ependymoma
- 98) Alveolar rhabdomyosarcoma; t(2;13)(q35;q14)
- 99) Medullary carcinoma of thyroid; mutations
- 100) Ulcerative colitis; superinfection with cytomegalovirus
- 101) Gastric carcinoid tumors; enterochromaffin-like cells
- 102) Desmoid tumor; FAP association
- 103) Focal segmental glomerulosclerosis ; podocin
- 104) Identification of *Helicobacter heilmannii*
- 105) Leiomyosarcoma; identification
- 106) Colon resected; cancer of the ampulla
- 107) **Deleted**
- 108) Intestinal adenocarcinoma
- 109) Giant cell tumor; telomeric chromosomal abnormality
- 110) Grade 1 chondrosarcoma; clinical characteristics
- 111) Very early complete hydatidiform mole; identification
- 112) Hyalinizing trabecular tumor; diagnose
- 113) Mediastinal mass, germinoma; clinical characteristics
- 114) Uterine serous carcinoma; p53
- 115) Immunohistochemistry in angiomyolipoma
- 116) Anaplastic oligoastrocytoma; FISH presentation
- 117) Angiomyofibroblastoma; diagnose from vaginal mass
- 118) Neurofibromatosis 1 and 2; autosomal dominant conditions
- 119) Embryonal rhabdomyosarcoma; diagnose from bladder biopsy
- 120) Whipple disease; small bowel mucosal biopsy
- 121) Recognition of colorectal medullary carcinoma
- 122) Identify olfactory neuroblastoma
- 123) Knowledge of characteristic translocations and fusion products in sarcomas
- 124) Cylindroma; diagnose from scalp lesion

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SURGICAL PATHOLOGY cont'd

- 125) Recognition of Wilms' tumor; nephroblastoma
- 126) Knowledge of rhabdomyoma
- 127) Recognition of juvenile nasopharyngeal angiofibroma
- 128) Respiratory papillomatosis
- 129) **Deleted**
- 130) Radiation-associated angiosarcoma; identification in breast tissue
- 131) Gardner syndrome; identify osteoma
- 132) Organ transplant; medication- gastrointestinal tract changes, mimic graft-versus-host disease
- 133) Recognition of Schwannoma
- 134) Sclerosing hemangioma, lung; immunohistochemical profile
- 135) Recognition of autoimmune pancreatitis
- 136) Diagnose endodermal choristoma; upper interventricular septum
- 137) Diagnose granulocytic sarcoma; skin biopsy
- 138) Identification of Fabry's disease
- 139) Diagnose cryptosporidiosis; colon biopsy
- 140) Clinical skin findings; genetic predisposition to chronic papillomavirus infection
- 141) **Deleted**
- 142) Polyoma virus; primary neuroendocrine carcinoma (Merkel cell carcinoma)
- 143) Identification of hemochromatosis
- 144) Identify lobular carcinoma in situ

CLINICAL PATHOLOGY

CLINICAL CHEMISTRY

- 145) Major intracellular cation; potassium
- 146) Transthyretin; nutritional status
- 147) Methanol ingestion; serum osmole gap
- 148) Cyclosporin therapy; effects of herbal antidepressants
- 149) Lymphoplasmacytic lymphoma; immunofixation characteristics
- 150) Hereditary angioedema; complement levels, C4
- 151) Positive deposits by Congo red stain; precursor substance serum amyloid A
- 152) Skin Biopsy; scleroderma
- 153) Microcytosis, normal iron, hemoglobin HPLC; diagnosis Alpha Thalassemia
- 154) Macrocytosis, methylmalonic acid; diagnosis vitamin B₁₂ deficiency
- 155) Allergic bronchopulmonary mycosis; Total IgE and IgE against *Aspergillus*
- 156) Protein content in lipid fractions
- 157) Clinical significance of homovanillic acid; oat-cell carcinoma
- 158) X-linked agammaglobulinemia; clinical history
- 159) Familial C2 deficiency; clinical presentation
- 160) Screen for cocaine; metabolite benzoylecgonine.
- 161) Non-parametric; statistical analysis
- 162) National Kidney Disease Foundation; laboratory evaluation of chronic kidney disease
- 163) Acetylcholinesterase; elevated amniotic fluid alpha fetoprotein
- 164) Hemoglobin E trait; high performance liquid chromatography interpretation
- 165) GC/MS derivatization; molecule volatile
- 166) Arsenic and mercury; toxic forms
- 167) Test sensitivity; calculate percent
- 168) Positive predictive value; definition
- 169) Hemoglobin Bonn; falsely decreased oxygen saturation measurements
- 170) Pharmacogenomic testing of warfarin dosing; *CYP 2C9* and vitamin K reductase
- 171) Free thyroxine, TSH
- 172) Coefficient of variation; calculation
- 173) Screening and monitoring of vitamin D
- 174) Pancreatitis; amylase, lipase, trypsinogen
- 175) Order of cardiac enzymes returning to normal following an acute myocardial infarct
- 176) Dexamethasone suppression test; interpretation
- 177) **Deleted**
- 178) NADH; absorbance wavelength
- 179) Conjugated bilirubin; Dubin-Johnson syndrome
- 180) Diagnostic criteria for diabetes mellitus; fasting blood glucose level
- 181) Marker for pancreatic carcinoma; CA19-9
- 182) Spectrophotometer; identify components
- 183) Type II cryoglobulinemia; hepatitis C
- 184) Cushing syndrome; urinary free cortisol
- 185) Extrahepatic biliary atresia; clinical characteristics

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HEMATOLOGY

- 186) Cystic fibrosis; clinical characteristics
- 187) Erythrocyte protoporphyrin; ferrochelatase
- 188) Flow cytometry; lymphocyte light scatter techniques
- 189) Automated cell counters; falsely low platelet count
- 190) Chronic myelomonocytic leukemia; absolute monocytosis, dysplasia, blasts
- 191) Immunophenotyping leukemia; B cell
- 192) T cell lymphomas; CD2, CD3, CD5, CD7 immunophenotyping
- 193) Tear drop and nucleated red cells; chronic idiopathic myelofibrosis
- 194) Defective NADPH oxidase; in chronic granulomatous disease
- 195) Laboratory screening tests of coagulation
- 196) Frequency of functional leukocyte disorders
- 197) Know causes of reticulocytopenia
- 198) Erythrocyte Morphology
- 199) Laboratory diagnosis of anemia; Beta thalassemia minor
- 200) Morphologic and immunophenotyping features of leukemias
- 201) Lupus anticoagulant;
- 202) Management strategy of heparin induced thrombocytopenia
- 203) Bovine thrombin; antibody to factor V
- 204) Antiplatelet antibodies in ITP; antigenic epitopes
- 205) AL amyloidosis
- 206) Pelger-Huët anomaly or myelodysplastic syndrome
- 207) Paroxysmal nocturnal hemoglobinuria; flow cytometry
- 208) Vitamin B₁₂ / folate deficiency; bone marrow morphology
- 209) Alpha-thalassemia and sickle cell trait
- 210) Mycosis fungoides
- 211) Reactive follicular hyperplasia
- 212) Peripheral blood smear with agglutination; effect on complete blood count
- 213) Acute promyelocytic leukemia; FISH
- 214) Neutrophil; toxic changes
- 215) Factor XIII deficiency; delayed bleeding
- 216) Acquired hemophilia; PTT not corrected with mixed normal plasma
- 217) Patient treated with GPIIb/IIIb inhibitor; thrombocytopenia cause
- 218) Identify chromosomal disorder associated with defects that prolong coagulation times
- 219) Platelet satellitosis
- 220) Identify histoplasmosis; in white blood cell
- 221) Laboratory findings; hemolytic anemia
- 222) Primary (idiopathic) myelofibrosis; mutated JAK2
- 223) Myeloid sarcoma; when it occurs de novo, relationship to AML
- 224) **Deleted**
- 225) Immunophenotypic features of marginal zone lymphoma
- 226) Follicular lymphoma, histology, flow cytometry and cytogenetics
- 227) Clinical indications; heterophil antibody test
- 228) Cryptococcus in cerebrospinal fluid
- 229) Crystal solubility; urine
- 230) Spurious low glucose; urine

MICROBIOLOGY

- 231) Stool assay; post antibiotic diarrhea
- 232) Identify *Proteus mirabilis*; agar plate
- 233) Gram stain; reagent effects
- 234) Identify gram-negative bacillus with beta-lactam subinhibitory antibiotic
- 235) *Strongyloides* larva; clinical symptoms and identification
- 236) Mycobacteria; Auramine-Rhodamine stain
- 237) Interpretation of the D-test
- 238) Dermatophyte infection; identification from potassium hydroxide (KOH) wet mount
- 239) Epstein-Barr virus infection; heterophile antibodies
- 240) Identify yeast; Gram stain
- 241) Mold identification; dematiaceous / pigmented mold
- 242) Yeast identification; growth morphology
- 243) Vancomycin resistance; bacteria
- 244) Rapid plasma reagin (RPR) test for syphilis; methodology
- 245) Diagnostic test; pertussis on nasopharyngeal swab
- 246) *Mycobacterium marinum*; growth properties
- 247) *Clostridium difficile* glutamate dehydrogenase antigen; characteristics
- 248) *Streptococcus agalactiae* (Group B); clinical presentation
- 249) Identify; *Ascaris lumbricoides*

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MICROBIOLOGY cont'd

- 250) *Neisseria meningitidis* sepsis; clinical and laboratory findings
- 251) Antibiotic resistance; *Staphylococcus aureus*
- 252) Identify; *Pediculus capitis*
- 253) *Candida krusei*; fluconazole resistance
- 254) Cystic fibrosis mucoid *Pseudomonas*
- 255) *Streptococcus pneumoniae*; capsule and virulence factor
- 256) Sodium borate; urine preservative
- 257) Sensitive and specific screening test; Hepatitis C virus (HCV)
- 258) MRC-5 Human diploid lung cells; virus culture
- 259) Western blot; confirmation test, HIV
- 260) Identify *Plasmodium falciparum*; peripheral blood smear
- 261) Asymptomatic colonization with MRSA; anterior nasal mucosal swab
- 262) Identify *Vibrio cholerae*; colonic mucosal biopsy
- 263) Gram-positive diplococcus; Optochin susceptibility
- 264) Martin-Lewis agar; *N gonorrhoeae*
- 265) **Deleted**
- 266) **Deleted**
- 267) *Mycobacterium fortuitum*; clinical and laboratory findings
- 268) Reduction of normal oropharyngeal bacteria; Sodium hydroxide 2% with N-acetyl L-cysteine
- 269) *Coccidioides*; culture identification
- 270) Polymerase chain reaction; Herpes simplex
- 271) Acid fast staining; *Mycobacterium* and *Cryptosporidium*
- 272) Extended spectrum beta-lactamase; *Klebsiella*

TRANSFUSION MEDICINE

- 273) Plasma products; expiration
- 274) Cryoprecipitate; minimum factor
- 275) Refrigerated Red Blood Cells; 2,3-DPG and hemoglobin-oxygen effects
- 276) Donor deferral; Creutzfeldt-Jacob disease
- 277) Transfusion practices; therapeutic plasma exchange with fresh frozen plasma
- 278) Hematopoietic stem cell allograft; transfusion ABO type selection
- 279) Paternity Tests; ABO, H
- 280) Unexpected red cell antibody proficiency testing; satisfactory performance
- 281) Patient granulomatous disease-abnormal neuromuscular; decrease cell antigen
- 282) HLA-A3, B27, DR2; clinical symptoms
- 283) I and i antigen reactions; interpretation
- 284) HLA antibodies; clinical findings in a transfusion reaction, TRALI
- 285) Nucleic acid Amplification Technology (NAT) testing; HCV and HIV risks
- 286) Polyspecific antihuman globulin direct antiglobulin test; antibody detection
- 287) Complications of chronic transfusion, sickle cell anemia
- 288) Fresh Frozen Plasma; factor deficiencies
- 289) Coagulation factor half-life
- 290) Infuse colloids; transfusion practices
- 291) Pediatric transfusion
- 292) Apheresis indication
- 293) Stem cell transplant dose
- 294) Calculate the number of vials of RhoGAM; from Kleihauer-Betke result
- 295) Blood donation; criteria to donate
- 296) Donor requirements; whole blood donation
- 297) Neonatal alloimmune thrombocytopenia clinical presentation
- 298) Donor reactions; hypovolemic and vasovagal reactions
- 299) Gamma irradiation; clinical blood component applications
- 300) Rh blood grouping system; Rh gene haplotype, Wiener terminology
- 301) Identify antibody specificity from red blood cell antibody panel
- 302) Red blood cell antibody panel; identify antibody against high frequency antigen
- 303) Hemolytic transfusion reaction; clinical findings
- 304) Hemochromatosis; labeling donor units
- 305) Fucosyltransferase; *H* and *SE* genes
- 306) Plasma exchange; principle
- 307) Type and screen; sample requirement
- 308) Paroxysmal cold hemoglobinuria; characteristics
- 309) Platelet transfusion; platelet concentrates
- 310) Platelet refractoriness
- 311) Hemochromatosis; therapy
- 312) Warm allo adsorption; clinical indications

SPECIAL TOPICS

HEMATOPATHOLOGY

- 313) Morphology of chronic myeloproliferative disorders
- 314) Acute monoblastic leukemia; t(9;11)(p22;q23); *MLL/AF9*
- 315) Nodular lymphocyte, predominant Hodgkin lymphoma; identification
- 316) Mantle cell lymphoma; immunophenotype
- 317) Diagnose; acute monocytic leukemia
- 318) PCR analysis of T-cell receptor gamma chain genes; clonality T-lineage non-Hodgkin lymphoma
- 319) **Deleted**
- 320) AML with inv 16; morphology
- 321) Diagnose acute erythroleukemia (M6a); bone marrow and peripheral blood smear
- 322) Identify Niemann-Pick disease from bone marrow aspirate
- 323) **Deleted**
- 324) Acute lymphoblastic leukemia; associated with necrosis
- 325) Follicular lymphoma involving bone marrow; incidence
- 326) Chronic idiopathic myelofibrosis and transformation to acute myeloid leukemia
- 327) Nasal T/NK lymphoma; necrosis
- 328) Anaplastic large cell lymphoma
- 329) Chronic myelomonocytic leukemia; spleen

LABORATORY ADMINISTRATION

- 330) Maslow; self actualization, hierarchy of human needs
- 331) Instrument precision; coefficient of variation
- 332) Health Level 7 (HL7); exchange of healthcare data
- 333) Random access memory and hard disc; effects of electrical power outage
- 334) Request for proposal; selecting new information system
- 335) Logical observation identifiers, names and codes (LOINC); purpose
- 336) Know data required for regressive analysis for method comparison
- 337) Laboratory budgets; large expense items
- 338) Physician ordering behavior; laboratory efficiency
- 339) Test value limits
- 340) Test utilization; effects on costs
- 341) Local Medical Review Policy; definition
- 342) HIPAA regulations; administration
- 343) College of American Pathologists Phase II deficiency
- 344) Waived testing; CLIA regulations
- 345) Autoverification; definition
- 346) IRB, protocols
- 347) Proficiency testing of analytes; requirements

SPECIAL TECHNIQUES

- 348) Develop "home brew" test; requirements
- 349) Genetic trait controlled by dominant gene; expression
- 350) X-linked recessive condition; characteristics
- 351) Prenatal chromosome analysis; indications to utilize
- 352) Karyotype; interpretation
- 353) Velo-Cardio Facial syndrome; chromosome abnormality detection method
- 354) Chromosome analysis, karyotype of metaphase spread; deletion
- 355) Karyotype; chronic myelogenous leukemia (CML)
- 356) X-chromosome genetic change; mental retardation
- 357) Retinoblastoma; gene product
- 358) Transcription mediated amplification; isothermal amplification
- 359) Heavy chain CDR3 length; V, D, and J segments
- 360) Prader-Willi syndrome
- 361) CTG and methylation by Southern blot; clinical significance
- 362) Transitional cell carcinoma
- 363) Warfarin metabolism; *cytochrome P450 2C9*
- 364) Inappropriate bands in control sample
- 365) Adenomatous polyposis coli, beta-catenin
- 366) DNA identity testing; Short tandem repeats (STR)
- 367) Mixed chimerism; chronic myeloid leukemia