YR 2 PATHOLOGY UNIT EXAMINATION 2 -- November 06, 1997.

CHOOSE THE SINGLE BEST ANSWER FOR QUESTIONS 1 - 100.

QUESTIONS 1 - 15 ARE RELATED TO THE PHOTHOGRAPHS INCLUDED IN THE TEST PACKET.

1.   What is the most likely diagnosis for the photomicrograph of kidney in Figure 1?

   A.   Post-streptococcal glomerulonephritis

   B.   SLE glomerulonephritis

   C.   Chronic (bacterial) pyelonephritis

   D.   Acute (bacterial) pyelonephritis

   E.   Hyperacute renal allograft rejection

2.   What is the most likely diagnosis for Figure 2 (a kidney at high magnification)?

   A.   Post-streptococcal glomerulonephritis

   B.   Wegener's granulomatosis

   C.   Scleroderma

   D.   Cellular allograft rejection

   E.   Acute rheumatic fever

3.   What is the best diagnosis for Figure 3?

   A.   Adenoma

   B.   Dysplasia

   C.   Hyperplasia

   D.   Barrett's esophagus

   E.   Inflammation

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4. What is the <u>best</u> diagnosis for Figure 4?

    A. Fibroadenoma

    B. Pleomorphic adenoma

    C. Sarcoma

    D. Lymphoma

    E. Adenocarcinoma

5. What is the <u>most</u> <u>likely</u> primary site of <u>origin</u> for the neoplasm
    shown in Figure 5?

    A. Uterine cervix

    B. Lymph node

    C. Large intestinal mucosa

    D. Prostate gland

    E. Breast duct

6. <u>Best</u> diagnosis for Figure 6:

    A. Cervical dysplasia

    B. Colorectal adenoma

    C. Invasive adenocarcinoma of the large intestine

    D. Invasive squamous carcinoma of the lung

    E. Leiomyoma

7. <u>Best</u> diagnosis for Figure 7:

    A. Lymphoma

    B. Cystadenoma

    C. Leiomyoma

    D. Papilloma

    E. Primary cardiac myocyte neoplasm in an adult

8. This section of colon <u>most</u> <u>likely</u> shows:

    A.   Invasive adenocarcinoma

    B.   A pedunculated adenoma

    C.   A form of preinvasive neoplasia

    D.   Normal mucosa

    E.   A neoplasm with desmoplasia

9. What is the <u>best</u> diagnosis for Figure 9?

    A.   Post-streptococcal glomerulonephritis

    B.   Rheumatic fever

    C.   SLE

    D.   Chronic pyelonephritis

    E.   Polyarteritis nodosa

10. Figure 10 shows a section of cardiac muscle. What is the <u>most</u> <u>likely</u> associated finding?

    A.   Positive culture for bacterial pathogen in this tissue

    B.   Excessive deposition of collagen in dermis

    C.   Positive c-ANCA

    D.   Erythema marginatum

    E.   Positive p-ANCA

11. Figure 11 is a high magnification photomicrograph of a renal glomerulus. What scenario fits <u>best</u> with the photo?

    A.   "Butterfly" facial rash and mitral valve fibrin deposits

    B.   Recent Strep infection

    C.   Myocardial Aschoff nodules and abnormal movements

    D.   Hypertensive vascular charges and pulmonary fibrosis

    E.   Destructive arthritis with pannus formation and ulnar deviation of digits.

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12. Least likely to be histologically evident in sections from the joint shown in Figure 12.

    A. Pannus

    B. Fibrin

    C. Ankylosis

    D. Mononuclear cell infiltrates

    E. Cartilage erosion

13. What is most likely associated with the finding in Figure 13?

    A. Pannus

    B. Fibrosis of the esophagus

    C. Pancarditis

    D. Liquefactive degeneration of the dermal epidermal junction

    E. Pulmonary granulomas

14. What is the most likely diagnosis for Figure 14?

    A. Bacterial infection

    B. Membranous glomerulonephritis

    C. Wegener's granulomatosis

    D. Scleroderma

    E. Polyarteritis nodosa

15. The blood vessel abnormality depicted in Figure 15 is least likely caused by, or associated with, which of the following?

    A. Glycosylation of proteins in the basal lamina

    B. Activation of complement

    C. Thrombus formation

    D. Immune complexes

    E. Auto-antibodies

16. Most likely diagnosis/explanation for morphologic findings in Figure 16:

    A.   Ascending bacterial infection

    B.   Recent Streptococcal pharyngitis

    C.   Transplant rejection

    D.   Hypertension

    E.   Fibrinoid necrosis

17. Which one of the following is <u>most</u> <u>likely</u> malignant?

    A.   Pleomorphic adenoma

    B.   Plasma cell myeloma

    C.   Teratoma of the ovary

    D.   Hamartoma

    E.   Hemangioma

18. You excise a 2cm intraparenchymal lung nodule which is firm but not rock hard, tan with areas of blue-grey tissue, very well circumscribed, mostly solid with a few slit-like cavities, with no necrosis on cut surface, and not present within a bronchus. Which of the following is the <u>most</u> <u>likely</u> diagnosis?

    A.   Papilloma

    B.   Squamous carcinoma

    C.   Small cell carcinoma

    D.   Hamartoma

    E.   Mesothelioma

19. Least likely cause of death due to neoplasia in the US pediatric population.

    A.   Glial neoplasm

    B.   Leukemia

    C.   Neuroblastoma

    D.   Osteosarcoma

    E.   Adenocarcinoma

20. Most useful criterion for Staging of colorectal adeno-carcinoma:

    A.   Size of the mass

    B.   Location of neoplastic cells relative to the muscularis propria

    C.   Degree of gland formation by neoplastic cells

    D.   Presence of anemia in the patient

    E.   Presence of vascular invasion by neoplastic cells

21. Most useful histologic criterion to diagnose malignancy in a neoplasm derived from smooth muscle population:

    A.   Mitotic rate

    B.   Tumor size

    C.   Invasion of epithelial basal lamina

    D.   Patient age

    E.   Presence of a karyotype abnormality

22. Invasive growth in epithelial neoplasia is least likely characterized by which of the following?

    A.   Necrosis

    B.   An irregular interface between neoplastic epithelium and stroma

    C.   Complete lack of differentiation

    D.   Desmoplasia

    E.   Small nests of neoplastic cells

23. Which of the following features is more characteristic of malignant than benign neoplasia?

    A.   Low nuclear to cytoplasmic ratio

    B.   Lack of mitotic activity

    C.   Maturation "arrest" close to stem cell level of differentiation

    D.   Intact basal lamina

    E.   Mobile and/or yielding to palpation

24. Least likely feature of a sarcoma:

    A.   Frequent mitotic figures

    B.   Elongated ("cigar-shaped") nuclei

    C.   Nuclear atypism

    D.   Excised from 2-12 year old patient

    E.   Lymphatic metastases

25. A dysplasia is, or may be, characterized by each of the following EXCEPT:

    A.   Vascular invasion

    B.   Glandular differentiation

    C.   Gene mutations

    D.   Presence of an abnormal tissue mass

    E.   Enlarged, irregularly-shaped nuclei

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26. Which of the following least likely represents a para-neoplastic syndrome.

   A.   Hypercalcemia in a lung cancer patient

   B.   Amyloidosis

   C.   Skin rash in a lung cancer patient

   D.   Elevated CEA in a bowel cancer patient

   E.   Dermatomyositis in a lung cancer patient

27. Least likely criterion for Staging of a patient with breast cancer:

   A.   Size of the mass in the breast

   B.   Length of time symptoms had been present

   C.   Invasion of skeletal muscle

   D.   Number of axillary lymph nodes which contain metastases

   E.   Presence of metastases in the lung

28. The location of metastases is least likely dependent on which of the following?

   A.   The route of lymphatic drainage from the primary organ

   B.   The route of venous drainage from the primary organ

   C.   The size of the neoplasm

   D.   The vascular anatomy of the secondary organ

   E.   The microenvironment of the secondary organ

29. Most useful feature to look for in a Pap smear:

   A.   Desmoplasia

   B.   Nuclear hyperchromatism

   C.   Irregular basal lamina

   D.   Inflammation

   E.   Angiogenesis

30. Most likely mode of presentation for a patient with pancreatic adenocarcinoma:

    A.   Jaundice

    B.   Obstructed bowel

    C.   Hypoglycemia

    D.   Bleeding gastric ulcer

    E.   Metastasis to iliac lymph nodes

31. You are designing a surgical therapy for patients with adenocarcinoma of the prostate. Based on your knowledge of disease behavior, which structures would you be most likely to remove?

    A.   Prostate and bladder

    B.   Prostate and urethra

    C.   Prostate, bladder and urethra

    D.   Prostate and seminal vesicles

    E.   Prostate and distal ureters

32. A leukemia patient of yours develops fever and multiple areas of tissue necrosis in lung tissue. Which of the following is most likely?

    A.   Infection with Mucor species

    B.   Infection with Histoplasma capsulatum

    C.   A paraneoplastic syndrome

    D.   Pulmonary fungus ball

    E.   Amyloidosis

33. <u>Least</u> likely associated with adenocarcinoma of the sigmoid colon:

A. Anemia

B. Cytoplasmic mucin in neoplastic cells

C. A sessile polypoid mass in the bowel

D. Metastases to left inguinal lymph nodes

E. Liver metastases

34. In a parallel universe, you are an investigator who designs novel therapeutic approaches for patients with invasive carcinomas of the uterine cervix. Which of the following would represent the <u>best</u> strategic approach?

A. Increase ERBB-2 levels in neoplastic cells

B. Increase myc levels in neoplastic cells

C. Decrease bcl-2 levels in neoplastic cells

D. Increase protein kinase C activity in neoplastic cells

E. Increase unphosphorylated Rb levels in neoplastic cells

35. After winning the Nobel prize, you become interested in neurofibromatosis. Which would be the <u>most</u> <u>direct</u> approach to preventing neoplasia in these patients?

A. Provide increased levels of ras activity

B. Enable ras to hydrolyze GTP

C. Repair mutations of ras-encoding DNA in germ cells

D. Decrease expression of ERBB-2

E. Increase expression of myc

36. Features present in both wound healing and invasive epithelial neoplasia arising from a mucosal surface include each of the following EXCEPT:

   A. Increased proliferation of epithelial cells

   B. Accumulation of mononuclear inflammatory cell populations

   C. Increased proliferation of fibrocytes and endothelium

   D. Many small nests of epithelial cells

   E. Synthesis and deposition of extracellular matrix

37. The time interval between diagnosis and recurrence of a 1 cm breast carcinoma is least related to which of the following?

   A. The growth rate of the primary neoplasm

   B. The number of angiolymphatic tumor cell emboli at time of diagnosis

   C. The size of the primary neoplasm when growth of metastastic colonies was initiated

   D. The growth rate of the metastases

   E. The grade of the neoplasm

38. The initiation step of chemical carcinogenesis least likely involves which of the following?

   A. Metabolic activation of a chemical carcinogen

   B. Free radical induced injury

   C. Newly acquired DNA mutations in terminally differentiated cells

   D. Cell division

   E. Inability to repair DNA mutations

39. Neoplasm most likely to be associated with clear cut inheritance of two abnormal alleles:

   A. Colorectal adenocarcinoma

   B. Retinoblastoma

   C. Neurofibroma

   D. Squamous cell carcinoma of the skin

   E. Breast carcinoma

40. Least important factor in development/evolution/diagnosis of lymphoma:

   A. Invasive growth

   B. Chromosomal translocation

   C. Viral infection

   D. Clonal growth

   E. Oncogene overexpression

41. The organ most likely to be destroyed by systemic lupus erythematosus:

   A. Brain

   B. Lungs

   C. Kidney

   D. Spleen

   E. Liver

42. All are sites of serious organ involvement in generalized (diffuse) scleroderma EXCEPT:

   A. Esophagus

   B. Kidneys

   C. Lungs

   D. Brain

   E. Skin

43. Antibody most frequently associated with polyarteritis nodosa:

    A.   Anti-Sm (Smith)

    B.   Rheumatoid factor

    C.   P-ANCA (perinuclear antineutrophil cytoplasmic antibody)

    D.   Antiphospholipid

    E.   Anticentromere

44. The component of the bacterial cell wall <u>not</u> involved in the development of acute rheumatic fever:

    A.   Protoplast membrane

    B.   Capsule hyaluronic acid

    C.   Lipopolysaccharide

    D.   M protein layer

    E.   Group carbohydrate

45. The joints most likely to be <u>spared</u> by rheumatoid arthritis:

    A.   Knees

    B.   Ankles

    C.   Wrists

    D.   Hips

    E.   Small joints of hands and feet

46. <u>Not</u> a major manifestation of acute rheumatic fever by the Jones criteria:

    A.   Polyarthritis

    B.   Chorea

    C.   Subcutaneous nodules

    D.   Carditis

    E.   Interstitial pneumonia

47. Clinically significant renal disease is least likely found in:

A. Systemic lupus erythematosus

B. Polyarteritis nodosa

C. Wegener's granulomatosis

D. Generalized (diffuse) scleroderma

E. Rheumatic fever

48. Clinically significant skin disease is least likely found in:

A. Rheumatic fever

B. Dermatomyositis/polymyositits

C. Rheumatoid arthritis

D. Ankylosing spondylitis

E. Generalized (diffuse) scleroderma

49. Which of the following statements about Legionella pneumophila is least likely to be correct?

A. The organism is an extracellular pathogen

B. Histologic sections from lung tissue of infected patients show mononuclear inflammation

C. The organism is a Gram negative bacterium

D. The organism requires special media for growth in culture

E. Patients with Legionella infection often exhibit extrapulmonary disease manifestations

50. Infection with <u>Mycoplasma pneumoniae</u> is <u>least</u> likely characterized by which of the following?

   A.   Requirement of special media for culture of the pathogen

   B.   Mononuclear infiltrates in lung tissue

   C.   High infectivity resulting in epidemic spread

   D.   Predisposition for causing medically serious infections in elderly patients

   E.   Formation of IgM antibodies which "cross-react" with erythrocyte plasma membrane antigens

51. Statement about respiratory syncytial virus which is <u>most</u> <u>likely</u> to be <u>CORRECT</u>:

   A.   Infection does not cause histologically evident cytopathic effect in human tissues

   B.   Infection causes granulomatous inflammation

   C.   Infection causes filling of alveoli with fluid and PMN's

   D.   Infection occurs most often in 5-10 year old children

   E.   Infection results in narrowing or partial obstruction of distal bronchioles

52. Which of the following statements about CMV (cytomegalovirus) is <u>least</u> <u>likely</u> to be correct?

   A.   The organism may be transmitted by blood transfusion

   B.   CMV pneumonia, in some patients, represents re-activation of latent infection

   C.   CMV pneumonia generally involves more than one pulmonary lobe

   D.   In most hosts CMV infection causes clinically-serious pneumonia

   E.   Congenital/neonatal infections may be clinically mild or subclinical

53. <u>Least</u> likely syndrome to be caused by <u>Toxoplasma gondi</u>:

    A.   Cerebral mass-like lesions

    B.   Encephalitis in a newborn

    C.   Purulent meningitis

    D.   "Flu-like" syndrome with lymph node enlargement

54. Inhibitors of smooth muscle cell proliferation include all of the following <u>EXCEPT</u>:

    A.   Heparan sulfates

    B.   Transforming growth factor beta (TGF-ß)

    C.   Nitric oxide (NO or EDRF)

    D.   Basic fibroblast growth factor (bFGF)

    E.   Interferon-gamma (IFN-gamma)

55. Thrombosis is a late event in atherosclerosis because:

    A.   It may give rise to anemic or hemorrhagic infarcts

    B.   It is inhibited by the hyperlipidemic state

    C.   It may be either occlusive or non-occlusive

    D.   It may be lysed by anticoagulant therapy

    E.   It follows ulceration or rupture of the luminal (endothelial) surface

56. Mechanisms contributing to development of the fibrous (atherosclerotic) plaque include all of the following <u>EXCEPT</u>:

    A.   Fibrosis of the adventitia

    B.   Lipid accumulation both intra-and extra-cellularly

    C.   Smooth muscle cell migration and proliferation

    D.   Monocyte adhesion and infiltration

    E.   Endothelial cell dysfunction

57. Vasculature (vessels) frequently involved in atherosclerosis include all of the following EXCEPT:

    A. Coronary

    B. Radial

    C. Aorta

    D. Carotid

    E. Popliteal

58. The initiating factor in the development of atherosclerosis is currently thought to be:

    A. Proliferation of intimal smooth muscle cells

    B. Monocyte/macrophage accumulation in the intima

    C. Endothelial cell dysfunction

    D. Elaboration of extracellular matrix by intimal smooth muscle cells

    E. Release of growth factors by the endothelial cells

59. Least likely serum lipid abnormality in survivors of myocardial infarction:

    A. elevated LDL cholesterol

    B. elevated chylomicron and VLDL remnants

    C. reduced HDL cholesterol

    D. elevated Lp(A)

    E. reduced triglycerides

60. A growth factor released by the key cell types participating in the development of the atherosclerotic plaque:

    A. PDGF

    B. VEGF/VPF

    C. IGF-1

    D. EGF/TGF-á

    E. GM-CSF

61. Fibrous (atheromatous) plaques:

    A.   Exhibit a heavy inflitration of plasma cells

    B.   Are primarily composed of smooth muscle cells and collagen
         fibers

    C.   Are typically a flat lesion

    D.   Localize on the anterior wall of the aorta

    E.   Tend to remain single, discrete lesions

62. Fatty streaks:

    A.   Are widely distributed in ethnic groups

    B.   Are universally accepted as the precursor lesion of the
         fibrous plaque

    C.   Are associated with narrowing of the vascular lumen

    D.   Are primarily composed of lipid laden smooth muscle cells

    E.   Are prone to ulcerate

63. Foam cell necrosis, that leads to the formation of the
    extracellular lipid core of the fibrous plaque, may be mediated
    by:

    A.   Increased permeability of the overlying endothelial cells

    B.   The cytotoxicity of modified LDL

    C.   Degradation by matrix metalloproteinases

    D.   Release of lymphokines from resident T-lymphocytes

    E.   Plasmin digestion of insudated plasma constituents

64. Least likely to be a pathogenetic event/pathologic finding in blood vessels from a diabetic:

A. Glycoslylation of collagen

B. LDL trapping

C. Atherosclerosis

D. Arteriolar hyalin change

E. PMN infiltrates

65. Most likely sequence of events in atherosclerosis:

A. Atrophy of media -to- foam cell accumulation -to- smooth muscle cell proliferation -to- hemorrhage

B. Sub intimal thrombi -to- smooth muscle cell proliferation -to- foam cell accumulation -to- fibrosis

C. Smooth muscle cell proliferation -to- fibrosis -to- intimal lipid -to- calcification

D. Foam cell accumulation -to- smooth muscle proliferation -to- angiogenesis -to- calcification

E. Cholesterol crystals -to- T lymphocyte infiltrates -to- smooth muscle proliferation -to- fibrosis

66. Least likely to be observed in histologic sections from a pulmonary infarct:

A. Hemorrhage

B. Coagulation necrosis

C. Atherosclerosis

D. Organized thromboemboli

E. Fibrin on pleural surface

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67. Least likely to be histologically observed in polyarteritis nodosa:

   A.   Foam cells

   B.   Aneurysm

   C.   Fibrin

   D.   Necrosis

   E.   PMN's

68. Least likely to be present in a CMV infection:

   A.   Positive culture for pathogen

   B.   Nuclear inclusions

   C.   Brain damage in a newborn

   D.   Non-specific, mild "flu-like" illness

   E.   Lobar pneumonia in immuno compromised patient

69. Most likely sequence of events in a joint involved by rheumatoid arthritis:

   A.   Synovial proliferation -to- inflammation -to- cartilage erosion -to- pannus

   B.   Cartilage erosion -to- inflammation -to- synovial proliferation -to- pannus

   C.   Inflammation -to- synovial proliferation -to- pannus -to- bone erosion

   D.   Inflammation -to- pannus -to- synovial proliferation -to- cartilage erosion

   E.   Pannus -to- inflammation -to- cartilage erosion -to- synovial proliferation

70. Best criterion to distinguish SLE from post-streptococcal disease involving kidney:

    A.   Cultures of pharynx

    B.   Presence of tubulointerstitial inflammation

    C.   Immunofluorescence studies showing glomerular IgG deposits

    D.   Presence of electron dense deposits on electron microscopy

    E.   Presence of glomerular hypercellularity

71. Best morphologic finding to distinguish kidney in a diabetic from kidney in a hypertensive (but not diabetic) patient:

    A.   Glomerular hyalin

    B.   Tubular atrophy

    C.   Hyaline thickening of arterioles

    D.   Glomerular basement membrane thickening

    E.   Interstitial fibrosis

72. EBV-associated neoplasia is least likely associated with or causally related to which of the following?

    A.   Chromosomal translocation

    B.   Disabled Rb expression due to binding interaction with virus encoded protein

    C.   Geographic variability in incidence

    D.   Abnormal expression of c-myc

    E.   Polyclonal proliferation of B lymphocytes

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73. Least likely p53 function/activity/effect:

    A.   DNA binding

    B.   Up regulation of apoptosis

    C.   Inhibition of cell cycle progression

    D.   Signal transduction at plasma membrane

    E.   Transcriptional regulation of other genes

74. In a bad dream you have elected to take a year off to do research in the Department of Pathology and your Professor asks you to evaluate tissue sections of neoplasms which have been stained for an abnormally expressed gene product. You observe plasma membrane staining (using a microscope, of course). Which of the following is the <u>most</u> likely gene product?

    A.   p53

    B.   E6

    C.   ras

    D.   cyclin D_1

    E.   myc

75. Least likely type of genetic pathology associated with oncogene over expression:

    A.   Translocation

    B.   Somatic mutation

    C.   Double minutes in karyotype

    D.   Inherited germline mutation

    E.   Homogeneously stained regions in karyotype

76. <u>Least</u> likely organism to be observed histologically in an H & E or silver stained tissue section:

    A.   <u>Mycoplasma</u> <u>pnemoniae</u>

    B.   CMV

    C.   <u>Toxoplasma</u> <u>gondii</u>

    D.   <u>Cryptococcus</u> <u>neoformans</u>

    E.   <u>Candida</u> <u>albicans</u>

77. <u>Best</u> way to diagnose acute rheumatic fever:

    A.   History and physical examination

    B.   Culture of heart tissue

    C.   Cultures of nasopharynx

    D.   Pericardial biopsy

    E.   Serologic studies

78. <u>Best</u> way to diagnose chronic rheumatic heart disease:

    A.   Myocardial biopsy to establish presence of hypertrophy

    B.   Serologic studies

    C.   Gross pathologic examination of cardiac valve

    D.   Cultures of nasopharynx, cardiac valves and myocardium

    E.   Chest x-ray

DIRECTIONS: Match the pathogen (A-E) to the most likely clinical
                scenario or pathologic alteration (79-83). Use each
                answer once only.

                    A.   Mucor species

                    B.   Aspergillus species

                    C.   Cryptococcus neoformans

                    D.   Histoplasma capsulatum

                    E.   Candida albicans

79.   Mucin positive capsule

80.   Organism often observed in Pap smears

81.   Healed granuloma in lung tissue

82.   Pulmonary infarct

83.   Hyphae branch at 90

Match the statement 84-86 with the best alternative
          listed A-G. Each alternative may be used once, more
          than once or not at all.

        A.   Rheumatoid arthritis

        B.   Polymyositis/dermatomyositis

        C.   Systemic lupus erythematosus

        D.   Polyarteritis nodosa

        E.   Generalized (diffuse) scleroderma

        F.   Mixed connective tissue disease

84. Aneurysmal dilatations of abdominal vasculature

85. Fibrin deposits on cardiac valves

86. Subcutaneous nodules

Match the statement 87-89 with the best alternative
                listed A-F. Each alternative may be used once, more
                than once or not at all.

        A.   Rheumatic fever

        B.   Polyarteritis nodosa

        C.   Polymyositis/dermatomyositis

        D.   Wegener's granulomatosis

        E.   Generalized (diffuse) scleroderma

        F.   Ankylosing spondylitis

87. Ulcerations of finger tips

88. Inflammation involving aorta

89. Immune complexes involving hepatitis B surface antigen

Match the statement 90-92 with the best alternative
             listed A-F. Each alternative may be used once, more
             than once or not at all.

        A.   Rheumatic fever

        B.   Polyarteritis nodosa

        C.   Polymyositis/dermatomyositis

        D.   Wegener's granulomatosis

        E.   Generalized (diffuse) scleroderma

        F.   Ankylosing spondylitis

90. Malignant hypertension may supervene.

91. Subcutaneous nodules.

92. Verrucous endocarditis

Match the statement 93-95 with the best alternative
             listed A-G. Each alternative may be used once, more
             than once or not at all.

        A.   Rheumatoid arthritis

        B.   Polymyositis/dermatomyositis

        C.   Systemic lupus erythematosus

        D.   Polyarteritis nodosa

        E.   Generalized (diffuse) scleroderma

        F.   Ankylosing spondylitis

        G.   Wegener's granulomatosis

93. Hematoxylin bodies

94. Raynaud's phenomenon

95. HLA-B27 serotype

Match the neoplasm (A-E below) to the <u>most</u> <u>likely</u> disease manifestation (96-100). Use each choice once only.

        A.   Breast carcinoma

        B.   Papilloma

        C.   Squamous carcinoma of lung

        D.   Invasive transitional carcinoma

        E.   Malignant germ cell neoplasm

96. Hypercalcemia

97. Hematuria

98. Intact basal lamina

99. Associated with mutation of inherited tumor suppressor gene

100. Increased serum alpha feto protein