Q1) patient with normal RBC AND WBC count, platelet count 750,000

Q) your diagnosis

a) chronic myeloproliferative disorder ……. most likely essential thrombocytemia

Q) We can determine the exact type of chronic myeloproliferative disorder by

a) Chromosomal studies ……. You need to exclude chronic myelogenous leukemia first

2) How to differentiate between Hodgkin lymphoma and other types of lymphomas?

The presence of RS cells

3) 55 OLD man come to you with back pain, you do examination, there is no bone lesion, there is spike in M protein so IgG level is 1.1 g/dl, there no protein in urine

Q) Your diagnosis is

a) MGUS (monoclonal gammopathy of undetermined significance) …….why? 1st asymptomatic person older than 50 year with levels of M protein less than 3 g/dl with no protein in the urine (bence-jones)

Q) Your next step

a) Tell patient this common disorder, nothing to worry about, come to me after 3 month to see your back………………. Why? because it is slowly changing into multiple myeloma at a rate 1% per year
Q) The lesion might develop into

a) Multiple myeloma

4) Which of the following not correct regarding ITP

A. It chronic in children

B. Occur in female more than male

C. Treated by immunoglobulin………….. actually it is caused by anti-platelets antibodies (immunoglobulin)

5) Patient (I forget age but I think 45) come to clinic with bleeding, this patient was known, cause he came to clinic before, we do CBC it was normal RBC and (I think slightly elevate WBC) and platelet count is 70,000….your following step is:

a) Do bleeding time

b) Do peripheral smear

c) Do antiplatelet antibody test

d) Do fibrin aggregation test

Actually I answered in the exam C but surprisingly the doctor told us that the answer was B

6) The common complication in chronic anemia:

a) Pulmonary infarction, edema, deep vein thrombosis

b) Heart failure, liver failure, kidney impairment. Anemia will cause a reflex on the heart to increase heart rate and cardiac output which initially may compensate but eventually it will fail
7) diffuse large B-cell lymphoma is:

a) **Rapidly fatal if left untreated** they are aggressive
b) treated by surgical and radiotherapy. Chemotherapy
c) cure only 5% of patient. 50 to 60% of patients

8) Mutation in Hemoglobin in sickle cell anemia:

A. **Decrease solubility of hemoglobin in deoxygenated state**… because once the RBCs are deoxygenated the abnormal hemoglobin aggregates and form crystals…. remember valine is hydrophobic AA.

B. Decrease solubility of hemoglobin in oxygenated state

C. Increase solubility of hemoglobin in oxygenated state

D. Increase solubility of hemoglobin in deoxygenated state

E. no effect on hemoglobin solubility

9) which is not correct about hairy cell leukemia:

A. Occur in adult less than 40
B. Occurs in female more than male
C. negative CD 20
D. all of the above

This question was wrong and we took as a bonus but if you want to answer just choose the first choice
10) patient with CD 10 + , CD 19 + TdT - , the diagnosis is

**Burkitt lymphoma since it is TdT –ve**

11) Question about translocation & BCL1 & Ig Low grade lymphoma ?

a) MALT Lymphoma
b) follicular Lymphoma
c) Small lymphocytic Lymphoma
d) **Mantle Lymphoma**

**Answer was**: mantle lymphoma (note that mantle is intermediate, so that this qus was given as bonus)

12) Which of the following is characteristic for immune hemolytic anemia :

A. splenomgaly

**B. positive DAT** ............... This is a test to detect the presence of the antibodies

C. shistocytosis

D. sphreocytosis

13) a patient's serum undergo electrophoresis , there is no Hb A , high Hb F and Hb A2 , and there are no other Hb :

**Answer**: B-thalassemia major
14) a case ques about a patient with Ovarian cancer, she got a chemotherapy then after that she had symptoms of another CA. .. they do the tests .. etc .. what is the diagnosis ?

A. CML
B. AML

15) The most common cause of dietary deficiency is:

a. Folate deficiency
b. Iron deficiency
c. B12 deficiency
d. Vit.A deficiency
e. Ascorbate deficiency

16) Vulnerability to IDA increases with:

a. Excessive cow's milk intake in children.
b. Maternity
c. Vit. A deficiency
d. Age from 6 months to 3 years
e. All of the above
1) All of the following are common finding of Thalassemia except?
   a. Decrease production of Hb
   b. Autosomal recessive
   c. Decrease reticulocyte count
   d. Ineffective erythropoiesis

2) Megaloblastic anemia is associated with?
   a. Increased Reticulocyte count
   b. Hypesegmented neutrophils
   c. Ovalocytes
   d. b+c

3) Marrow response to Hemolysis is?
   a. hypercellular with decreased M;E ratio (due to increased erythropoiesis and proliferation of the erythrocyte precursors)
   b. Hypocellular with decreased M;E ratio
   c. Hypercellular with increased M;E ratio

4) The therapeutic goal of treatment of sickle cell disease:
   a. dilution of HbS (decrease in its concentration) and increase RBC’s size
      
      remember hydroxyurea which increase MCV

5) an example of immune hemolytic anemia
   a. transfusion reactions between mismatched individuals
   b. cold antibody IgA……. its IgM
   c. warm antibody with mostly IgA….. its IgG
6) Thrombocytopenia, microangiopathic hemolytic anemia, CNS abnormalities, Fever are all related to?

a. TTP (just remember the pentad criteria and how to differentiate it from HUS)
b. HUS
c. ITP

7) CML?

a. middle-aged disease (25-60)
b. t(9,22) ........ Philadelphia chromosome BCR-ABL characteristic
c. blast cells are less than 20% ........ especially in the chronic phase and the accelerated phase
d. All of the above

8) All are causes of thrombocytopenia except?

a. TTP
b. low platelets count
c. **iron deficiency**
d. Drugs .... Remember heparin ---induced thrombocytopenia

9) Ringed sideroblasts & hyposegmented neutrophils are associated with?

a. megaloblastic anemia ....... it is associated with **hypersegmented** neutrophils
b. **myeloproliferative disorder**
c. iron deficiency
10) Which of the following is the immunophenotype of RS cells?

CD45-ve, CD15 +ve, CD30+ve and CD20+ve …… remember it has proven to be mutated B-cells so CD20

11) BCL-1 is associated with low grade lymphoma?

Marginal zone lymphoma (check your textbook)

12) 30-year old woman presented with mediastinal mass. Upon examination we found that she had a Hodgkin lymphoma …. What’s the subtype?

A) Nodular sclerosis …….. It has a predilection for involvement of cervical and mediastinal lymph nodes of young adults which has a characteristic lacunar cells..with CD15 and CD30

13) A 17-year old patient presented with signs of anemia and thrombocytopenia for the last 3 months he came with severe bleeding. We took bone marrow smear and we found that the immunophenotype of the cells in the smear is CD3, CD34 and CD20, what type of leukemia the patient had?

a) Acute lymphoblastic leukemia of pre T-cell type …… Please note that though we have CD20 but it is not B–cell specific whereas CD3 is T-cell specific

14) Auer rods

A) characteristic of AML with t(15….17)
1) regarding hemolytic anemia all are true except:
   myeloid hyperplasia with increase M/E ratio

2) translocation most commonly seen in burkitt lymphoma:
   a. t(8:14)

3) one of the following is low grade lymphoma:
   follicular lymphoma

4) Hodgkin reed sternberg cell is positive for all of the following except:
   a. CD45

5) Most common form of Hodgkin lymphoma:
   b. Nodular sclerosis

6) all of the following are favorable prognostic factors except:
   c. mediastinal mass

7) mutation in junus 2 kinase are commonly found in all of the following except:
   d. chronic myelogenous leukemia

8) the first disease in which a therapeutic agent was used to target molecular defect is:
   e. chronic myelogenous leukemia

9) All of the following is myeloproliferative disorder except:
   Refractory anemia with excess blasts

10) which of the following acute mylogenous leukemia subtype characterized by gingivial infiltration:
    a. AML M5
11) sickle cell anemia in adults is characterized by all of the following except:
   f. splenomegaly

12) splenectomy in Hereditary spherocytosis:
   g. will correct the anemia but the spherocytosis remain

13) 12 years old boy developed fever, pallor, petechie, WBC 50 000 and has mediastinal mass, the more likely diagnosis is:
   h. T- acute lymphoblastic leukemia

14) Acute lymphoplastic leukemia is characterized by all of the following except:
   i. Presence of auer rods

15) all if the following cause microcytic hypochromic anemia except:
   j. Aplastic anemia

16) red cell distribution width is measure of:
   k. red blood cells variations in size.

17) your patient present with anemia and you are suspecting hemoglobinopathy, which is the best test to confirm this:
   l. hemoglobin electrophoresis

18) megaloblastic anemia is characterized by all of the following except:
   m. neurological symptoms will be reversed by administration of folic acid.
19) one of the following tests is recommended for premariatel test for hemoglobinopathies;
   n. CBC and blood film examination

20) Beta-thalassemia major is characterized by all of the following except:
   o. Low Retics count

21) screening test for platelet function for von willebrand disease:
   p. bleeding time

22) DIC is characterized b all of the following except:
   q. Normal platelet count

23) thrombocytopenia id due to increased peripheral destruction of platelets is seen in all of these except:
   r. Aplastic anemia

24) which of the following defect is associated with hemophilia:
   defective gene on X-chromosome