U2 Hematology

U3 Myeloproliferative neoplasms

#Myeloproliferative Neoplasms are characterized by all of the following except

clonal disorders

they may evolve into acute leukemia

+initial increase of immature cells

increased production of mature cells

#In chronic myelogenous leukemia, the total leukocyte (WBC) count is

+extremely increased

slightly increased

extremely variable

usually normal

#Primary myelofi brosis differs from other types of Myeloproliferative Neoplasms in which of the following ways?

Ph1 chromosome is present

+Marrow fi brosis is greatly increased

LAP score is increased

Platelet count is increased

#Which of the following is a remarkable characteristic of Polycythemia vera compared with other types of Myeloproliferative Neoplasms?

+extremely increased erythrocyte mass

extremely increased leukocyte count

extremely increased platelet count

teardrop-shaped erythrocytes

#Which of the following is a predominant feature of essential thrombocythemia compared with other types of Myeloproliferative Neoplasms?

variable number of platelets

moderately increased number of platelets

+extremely increased number of platelets

increased marrow fibrosis

#In Myeloproliferative Neoplasms, the test results of disorders of hemostasis and coagulation that are most likely to be abnormal are

decreased platelet count, increased APTT, and increased factor V level

+increased APTT, decreased factor V level, and increased concentration of antithrombin III in

many

decreased APTT, decreased factor V level, and increased concentration of D-dimers

decreased concentration of D-dimers, decreased concentration of antithrombin III, and increased concentration of plasmin-alpha 2-plasmin inhibitor complex

#Interferon alfa has been shown to

stimulate trilineage cell proliferation

+suppress proliferation of hematopoietic progenitor cells

subdue erythropoiesis only

suppress megakaryocytopoiesis only

#A leukemia of long duration that affects the neutrophilic granulocytes is referred to as

acute lymphoblastic leukemia

acute myelogenous leukemia

acute monocytic leukemia

+chronic myelogenous leukemia

#The alkaline phosphatase cytochemical staining reaction is used to differentiate between

chronic lymphoblastic leukemia and acute myelogenous leukemia

acute lymphoblastic leukemia and acute myelogenous leukemia

+chronic myelogenous leukemia and severe bacterial infections

leukemoid reactions and severe bacterial infections

#Patients with the initial phase of chronic myelogenous leukemia are prone to

weight gain, edema, and fatigue

edema, anemia, and splenic infarction

+low-grade fevers, night sweats, and splenic infarction

prominent lymphadenopathy and night sweats

#The total leukocyte count in chronic myelogenous leukemia usually is \_\_\_\_\_ ×109/L.

normal

<25

<50

+ >50

#The Philadelphia chromosome is typically associated with

acute myelogenous leukemia

leukemoid reactions

acute lymphoblastic leukemia

+chronic myelogenous leukemia

#Patients with polycythemia vera suffer from

leukemic infiltration

bone marrow fibrosis

+hypervolemia

anemia

#In polycythemia vera, cytogenetic results do not predict/provide

duration of the disease

consequences of myelosuppressive therapy

clues to hematological phenotype

+evolution of the disease

#Hyperviscosity can produce

anemia

+dizziness

hemorrhages

psychotic depression

#The major criteria for diagnosis of polycythemia vera include all of the following except

increased red blood cell mass

presence of JAK2V617F

hypercellular bone marrow

+splenomegaly

#Increased blood viscosity in patients with polycythemia vera can cause a dangerous condition of

hot flushes

shortness of breath

high rdw

+vascular occlusion

#The level of erythropoietin in the urine is \_\_\_\_\_in patients with polycythemia vera compared with other kinds of polycythemia.

increased

the same

variable

+decreased

#Patients with polycythemia vera demonstrate a(n) \_\_\_\_\_ of hemosiderin in the bone marrow.

+absence

normal amount

slightly increased amount

extremely increased amount

#Treated patients with polycythemia vera have a \_\_\_\_\_ life expectancy after diagnosis.

1- to 6-month

6- to 12-month

1- to 5-year

+more than 10-year

#The primary treatment for polycythemia vera is

+therapeutic phlebotomy

myelosuppressive agents

radioactive phosphorus

low-dose busulfan

#Primary myelofi brosis is also called

essential thrombocythemia

chronic myelogenous leukemia

polycythemia vera

+agnogenic myeloid metaplasia

#The incidence of primary myelofi brosis is known to increase after exposure to

sunshine

+benzene

antibiotics

interferon

#The predominant clinical manifestation of primary myelofibrosis is

anemia

splenomegaly

medullary fibrosis

+all of the above

#The most constant feature of primary myelofibrosis is

dyserythropoiesis

dysleukopoiesis

+dysmegakaryocytopoiesis

trilineage maturational disruption

#A leukoerythroblastic picture includes all of the following except

teardrop-shaped erythrocytes

nucleated erythrocytes

+immature lymphocytes

immature myeloid cells

#The median survival time for patients with primary myelofibrosis is approximately \_\_\_\_\_ year(s).

1

3

+5

10

#The least common form of myeloproliferative neoplasms is

polycythemia vera

hronic myelogenous leukemia

primary myelofi brosis

+essential thrombocythemia

#A major criterion for the diagnosis of essential thrombocythemia is

absence of ph1 chromosome

increased red blood cell mass

mild neutrophilia in peripheral blood

+persistent increase of platelets in peripheral blood

#The most common disorder in patients with essential thrombocythemia is

+neurological manifestations

thrombotic or bleeding problems

abnormal karyotype

anemia

#The bone marrow architecture in essential thrombocythemia is similar to the architecture seen in

erythroid hyperplasia

leukocyte hyperplasia

+chronic myelogenous leukemia

lymphocytic leukemia

#Patients with some variety of myelodysplastic syndromes are at increased risk of developing

acute lymphoblastic leukemia

+acute myelogenous leukemia

chronic lymphocytic leukemia

chronic myelogenous leukemia

#Which of the following agents has not been supported by scientifi c research as being associated with the development of secondary myelodysplastic syndromes?

alkylating agents

organic solvents

insecticides

+both b and c

#An increased incidence of myelodysplastic syndromes is seen in

males younger than 55 years of age

females younger than 55 years of age

+males older than 55 years of age

females older than 55 years of age

#The most frequently involved chromosomes in adults with myelodysplastic syndromes are

1, 5, and 7

3, 5, and 8

+5, 7, and 8

8, 12, and 13

#The most frequent chromosomal abnormalities in children with myelodysplastic syndromes include all of the following except

trisomy 8

monosomy 7

deletion of long arm of chromosome 20

+all of the above

#The incidence of chromosomal abnormality in adults with myelodysplastic syndromes is

5% to 15%

15% to 25%

25% to 60%

+40% to 90%

#The karyotype associated with a high probability of transforming to acute myelogenous leukemia is

monosomy 5

monosomy 7

trisomy 11

+both a and b

#Patients with myelodysplastic syndromes commonly suffer from \_\_\_\_\_ initially.

a rash

+anemia

visual disturbances

vertigo

#In young patients, the therapy of choice for myelodysplastic syndromes involves

vitamins

+allogeneic bone marrow transplantation

cytotoxic drugs

colony-stimulating growth factors

#The best description of polycythemia vera is that it is characterized by:

+Increased red cell mass

Leukopenia

Thrombocytopenia

Increased myeloblasts

#An RBC poikilocytes that is considered to be the first sign of spent phase of polycythemia is the

+Dacrocyte

Spherocyte

Target cell

Schistcyte

#.--------are the cells most responsible for the appearance of the marrow in agnogenic myeloid metaphase

Neutrophils

Erythrocytes

Lymphocytes

+Fibrocytes

#Hydoxyurea treatment may result in megaloblastic morphology because hydroxyurea is an:

Alkylating agent that damages DNA

+Inhibitor of DNA replication

Inhibitor of platelet function

Inhibitor of maturation

#Which of the following laboratory abnormalities would be least likely in a patient with PV at the time of diagnosis?

Leukocytosis with absolute granulocytosis

Normoblasts in the peripheral blood

+Thrombocytopenia

Abnormal platelet function studies

#Which criteria must be present for a diagnosis of polycythemia vera that will meet the criteria of the polycythemia vera study group?

Any two from category A combined with any two from category B

One from category a and three from category B

+Elevated red cell mass and normal arterial oxygen saturation combined with any two category B criteria

Non of the above

#Which of the following is induced among the category B criteria of the polycythemia vera study group for the diagnosis of polycythemia vera?

Thrombocytopenia

Leukopenia

+Elevated serum B12 or unbound B12 binding capacity

Decreased leukocyte alkaline phosphatase score.

#Which of the following would be least likely in a patient with idiopathic myelofibrosis:

Tear-drop RBCs on peripheral smear

+Erythrocytosis

Splelenomegaly

Nucleated RBCs on peripheral smear.

#Which of the following is most helpful in differentiating idiopathic myelofibrosis from myelofibrosis secondary to some other process?

Serum protein electrophoresis

Serum uric acid

+Bone marrow biopsy

Urinary muramidase

#Which of the following has been most closely associated with the development of chronic myeloid leukemia?

+Exposure to ionizing radiation

Recurrent herpes virus infection

Chronic active hepatitis

Lead toxicity