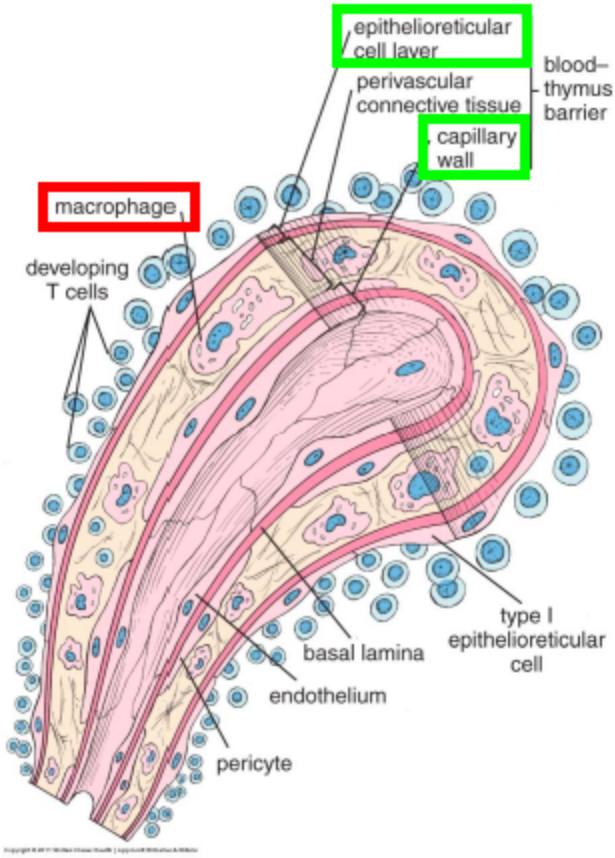
1	D	19	D	37	D	55	B	73	D
2	E	20	A	38	D	56	D	74	B
3	E	21	B	39	C	57	C	75	A
4	C	22	B	40	A、D	58	C	76	A
5	D	23	A	41	D	59	C	77	B
6	B	24	D	42	A	60	A	78	B
7	C	25	C	43	D	61	B	79	C
8	B	26	D	44	D	62	C、D	80	D
9	D	27	B	45	D	63	B	81	B
10	C	28	A	46	A	64	D	82	送分
11	A	29	C	47	B	65	C	83	B
12	C	30	D	48	D	66	C	84	C
13	D	31	C	49	D	67	E	85	E
14	C	32	A	50	A	68	B	86	D
15	A	33	B	51	A	69	D	87	C
16	C	34	C	52	C	70	C	88	E
17	B	35	B	53	A	71	A	89	C
18	D	36	D	54	B	72	B	90	B

高雄醫學大學103學年度第3學期 期中考試考題詳解(共　頁)					
科目	命題教師	考試時間	系(所)年級	學號	考生姓名
Block 11	邱世欣老師等	120分鐘	後醫系二年級		

考題1	The spllen is a blood- filtering organ, and it has both closed and open circulations. Where does the open circulation take place? (A)Central artery

	(B)Periarterial lymphatic sheath (C)Traceulae (D)Splenic cords in red pulp (E)Sinusoids in red pulp 本題正解: (D) 本題詳解: Simple Anatomy 考題出處: Histology 黃宏圖
考題2	Most lymphatic organs consist of lymphatic tissues that are supported by other connective tissue. Which organ does not have lymphatic nodules? (A) Lingual tonsil (B) Palatine tonsil (C) Spleen (D) Lymphatic nodule (E) Thymus 本題正解: (E) 本題詳解: 課堂講義 考題出處:【組織學】淋巴結、脾臟、胸腺組織學-黃宏圖
考題 3	To protect developing T celsl from antigens in the blood, the thymus develops blood-thymus barrier (血液胸腺障壁). Which one of the following statment is correct? (A) Macrophages are present in the endothelial layer (B) Macrophages are present in epithelioreticular cell layer (C) Macrophages are present in the blood stream of lobules. (D) Macrophages adhere to the outer surface of epithelioreticular cell layer. (E) Macrophages are present in connective tissue between the capillary wall and epithelioreticular cell layer.

	本題正解: (E) 本題詳解:Perivascular connective tissue (between capillary wall and epithelioreticular cell layer) occupied by macrophages  考題出處:【組織學】淋巴結、脾臟、胸腺組織學-黃宏圖
考題 4	From which of the following organs is the tissue section taken? (A) Pharyngeal tonsil (B) lymph node (C) spleen (D) Thymus (E) Palatine tonsil 本題正解: (C)

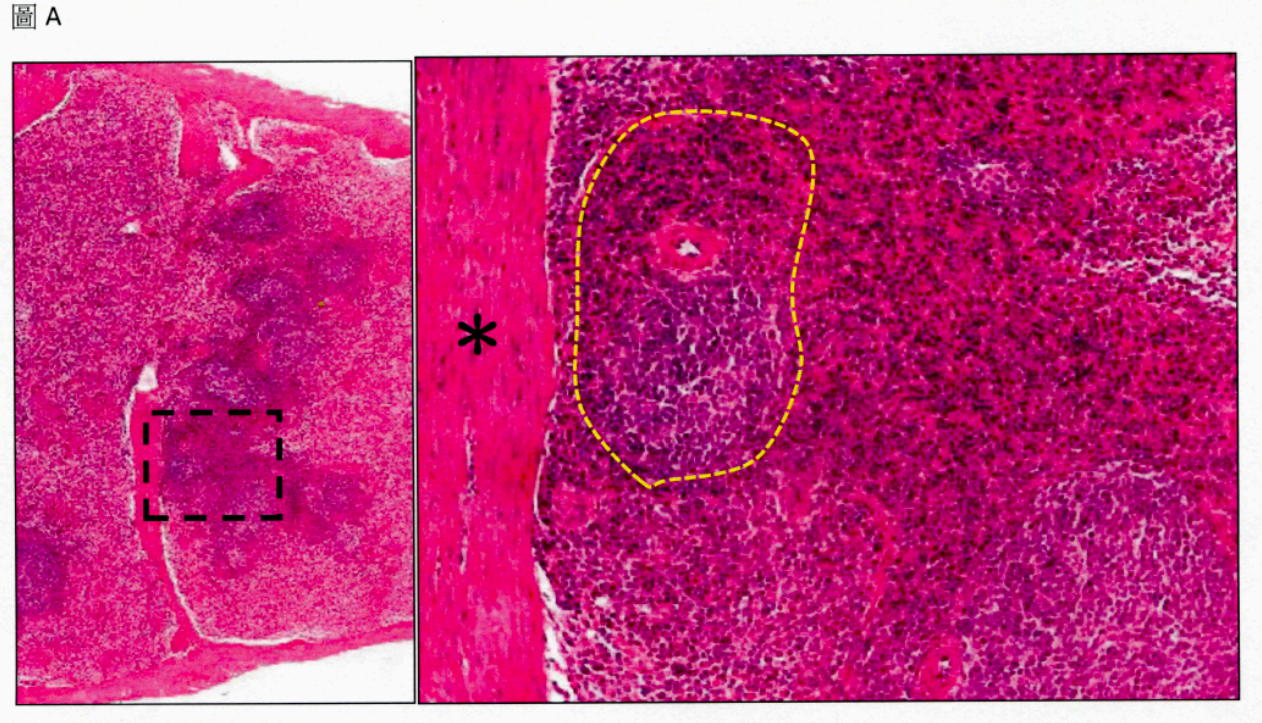
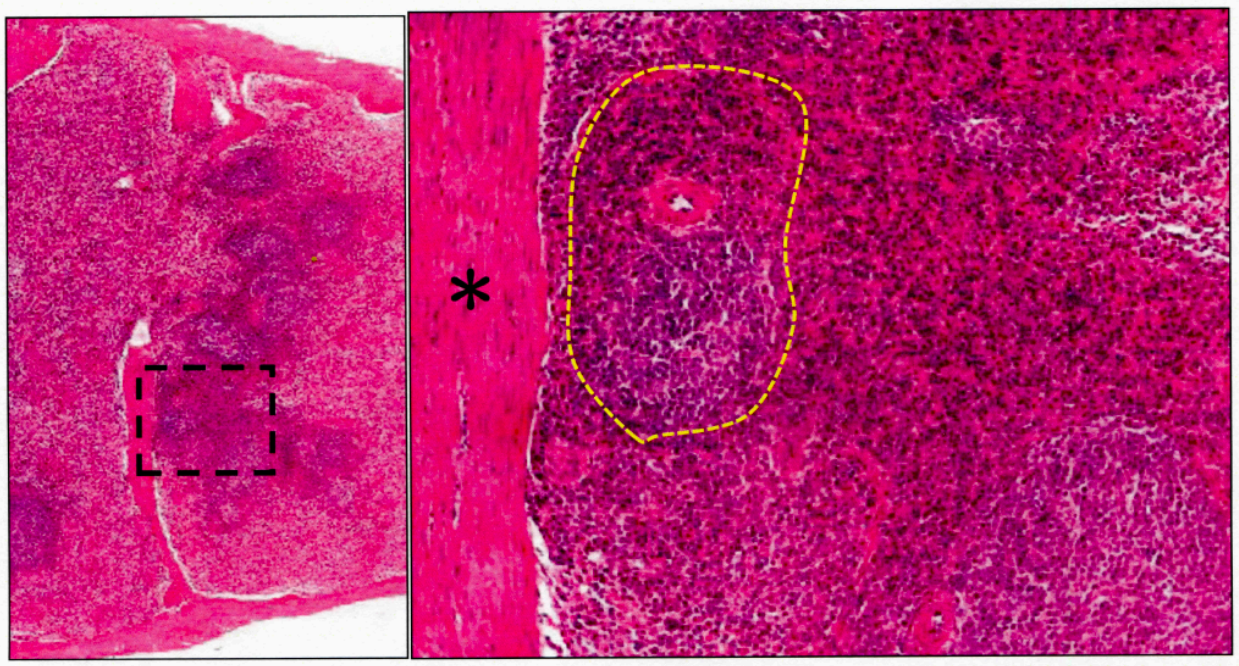
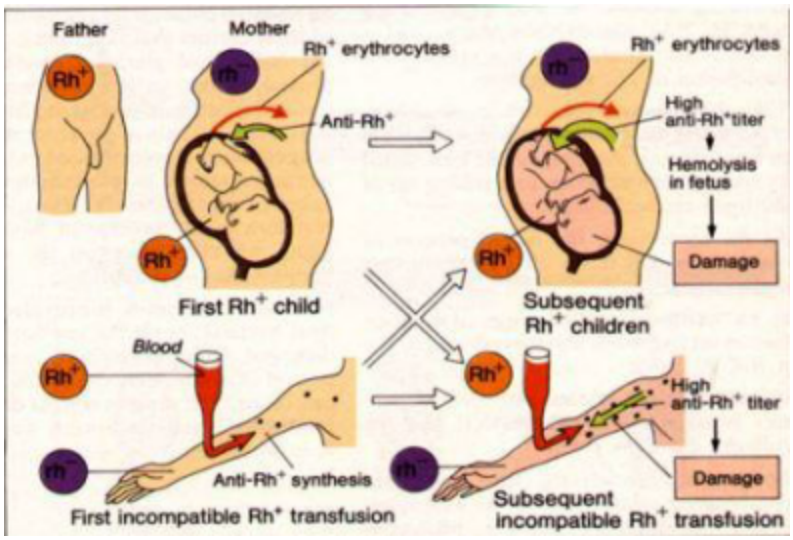
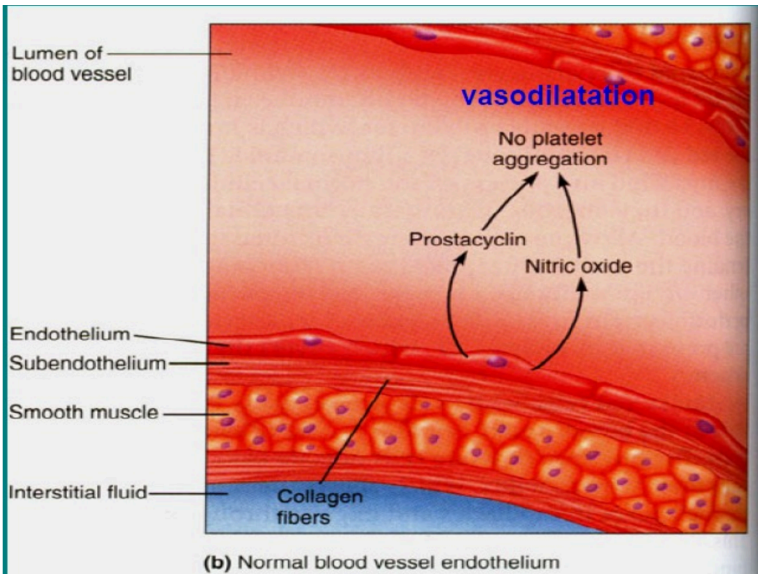
	本題詳解:  圖 A 考題出處: [組織學實驗] 淋巴結、脾臟、胸線 黃宏圖
考題5	What structure labled by the astrisk (*)? (A) Capsule (B) Cortex (C) Medulla (D) Trabecula (E)Lymphatic tissue

	圖 A  本題正解: D 考題出處: [組織學實驗] 淋巴結、脾臟、胸線 黃宏圖
考題6	下列何種組合最可能造成紅血球母細胞增多症(erythroblastosis fetalis)? (A)母親(Rh -):胎兒(Ph-) (B)母親(Rh -):胎兒(Ph+) (C)母親(Rh +):胎兒(Ph-) (D)母親(Rh +):胎兒(Ph +) 本題正解:B 本題詳解:RH 血型輸血反應 3.Significant when Rh- mother gives birth to Rh+ baby －At birth, mother may become exposed to Rh+ blood of fetus. · Mother at subsequent pregnancies may produce antibodies against the Rh factor. Erythroblastosis fetalis: hemolytic disease of newborn Father: Rh(+), mother: Rh(-), fetus: Rh(+) Treatment: 以 Rh(-)者的血液, 置換 newborn 的血液, keep bilirubin level low and prevent brain damage Prevention: by passive immunization during postpartum period, 即對 Rh(-) mother 在產後 72hrs 內注射 anti-Rh (Rh immune globulin),則可 prevent active Ab formation by mother.

	 考題出處:王昭仁 血液生理學
考題7	7.活化血栓調節蛋白(thrombomodulin)可抑制下列何種凝血因子的活化？ (A) Ⅱ (B)Ⅶ (C)V (D)X 本題正解:C 本題詳解: 內皮細胞產生的thrombomodulin能和血液中的thrombin結合, 活化protein C, 抑制 factor Ⅷa和 factor Va, 產生抗凝血的功能。 考題出處:王昭仁 血液生理學
考題8	8. bilirubin 和glucoronic acid 的共軛反應(conjugation) 最主要發生在何種器官 A) 脾臟 B) 肝臟 C) 胰臟 D) 腎臟 本題正解:B 本題詳解: unconjugated (indirect) bilirubin 在肝臟合成為conjugated (direct) bilirubin 後再與 bile salt 混合形成膽汁經膽管注入十二指腸 考題出處:王昭仁 血液生理學
考題9.	下列何種血液中成分,最主要是由白蛋白(albumin)所攜帶? (A)膽固醇(cholesterol)(B)三酸甘油脂(triglycerides)(C)磷脂質(phospholipids)(D)游離脂肪酸 (free fatty acid) 本題正解:D 本題詳解:free fatty acid 是由albumin攜帶 考題出處:王昭仁 血液生理學

考題10	10. 啟動內在路徑(intrinsic pathway) 的凝血因子(blood clotting factor), 下列何者最正確? (A) II (B) VII (C)XII (D) X 本題正解: (C) 本題詳解: II and X are in common pathway, VII is in extrinsic pathway 考題出處:王昭仁 血液生理學
考題11	11. 有關肝素(heparin), 下列敘述何種最正確？ (A) 抑制 II, IX, X, XI, XII 凝血因子的作用 (B) 抑制 III, IX, X, XI, XII 凝血因子的作用 (C) 抑制 II, V, X, XI, XII 凝血因子的作用 (D) 抑制 II, VI, X, XI, XII 凝血因子的作用 本題正解:(A) 本題詳解 :heparin的作用機制為抑制凝血因子II, IX, X, XI, XII。 **考題出處:王昭仁老師 血液生理學**
考題12.	12. 正常的血管內皮細胞, 會釋放下列何種物質以防止血小板凝集的擴散? (A)胞漿素(plasmin) (B)凝血脂素A2(thromboxane A2) (C)prostacyclin (D)ADP 本題正解:(C)

	本題詳解:  本題出處:王昭仁老師, 生理學Vol2 共筆p17
考題13	13. 下列有關正常血球的數目(個/微升microliter), 何者最正確？ (A) 紅血球約1百萬個 (B) 白血球約5萬個 (C) 血小板約五萬個 (D) 嗜中性球約五千個 本題正解:D 本題詳解 :RBC-4.8~5.4x106; WBC-4000~11000; platelets-20萬～50萬; 嗜中性球-3000~6000 **考題出處:王昭仁老師 血液生理學**
考題14	14. **下列何者為刺激腎臟產生紅血球生成素** (Erythropoietin) **的主要因素**？ (A) **鹼中毒** (B) **低血糖** (C) **缺氧** (D) **低鉀症** **本題正解**:(C) **本題詳解**:Factors that decrease oxygenation in tissue will increase erythropoietin released from kidneys:(1) low blood volume (2) anemia (3) low hemoglobin (4) poor blood flow (5) pulmonary disease

	考題出處:王昭仁老師 生理學:造血發生、造血因子與血液生理 p.19
考題15	15. 血型為 AB Rh^- 之病人, 最不建議給予下列何種全血進行輸血？ (A) O Rh^+ (B) A Rh^- (C) AB Rh^- (D) B Rh^- 本題正解: (A) 本題詳解: Rh^- 不能接受 Rh^+（只有A選項跟其它最不一樣, 不選它選誰） 考題出處: 王昭仁老師 生理學-造血發生、造血因子與血液生理
考題16	16. 下列何者非貧血治療劑？ (A) vitamin B12 (B) erythropoietin (C) deferoxamine (D) folic acid 本題正解: (C) 本題詳解: deferoxamine是作為鐵離子中毒的解毒劑 考題出處: 王昭仁老師 生理學-造血發生、造血因子與血液生理 (deferoxamine 葉竹來老師也有提到喔)
考題17	17. 胃(stomach)所分泌的內生性因子(intrinsic factor), 最主要保護下列何種成分在腸道的吸收？ (A) 鐵 (B) Vitamin B12 (C) 葉酸 (D) 膽鹽 本題正解: (B) 本題詳解: Intrinsic factor 再腸道結合Vitamin B12, 並在Jejunm被吸收 考題出處:王昭仁老師 生理學-造血發生、造血因子與血液生理
考題18	18.血型試驗中, 當受試者血液於抗A與抗B血清中都有觀察到凝集現象時, 表示受試者的血型是?

	(A) A型 (B) B型 (C)O型 (D)AB型 本題正解: (D) 本題詳解:A型含凝集原A、B型含凝集原B、O型不含凝集原、AB型含凝集原A&B 考題出處:生理學實驗-血液生理學 鄭琮霖老師
考題19	何種抗凝血劑可能會造成血球膨大? (A)草酸鉀(Potassium oxalate) (B)草酸鋰(Lithium oxalate) (C)肝素(Heparin) (D)草酸銨(Ammonium oxlate) 本題正解:(D) 本題詳解:草酸鉀使血球縮小, 草酸銨造成血球膨大, 肝素和草酸鋰不會使血球發生型態改變 考題出處::生理學實驗-血液生理學 鄭琮霖老師
考題20	價格較昂貴的抗凝血劑是? (A) 肝素(heparin) (B) 檸檬酸鈉(lithium oxalate) (C) 草酸鉀(potassium oxalate) (D) 草酸鈉 (sodium oxalate) 本題正解:(A) 本題詳解: **3. 血液凝固之防止：加入抗凝血劑以防止血液之凝固。** **1）肝素(heparin)：血液中 100mL 有 1 毫克肝素就能防止血液凝固，而且血球不致變化，甚為理想之抗凝血素，輸血時 100mL 血液加入肝素 4 毫克。但因價格昂貴，並不適日常之用。** **2)檸檬酸鈉（Sodium Citrate）：血液 1mL 與此抗凝血劑 5 毫克混合可防止血液凝固，3.8%檸檬酸鈉能和血液成等張溶液，臨床上使用本劑以輸血和血球沉降速率之測定較多。** **3)草酸鹽(Oxalate)：通常以草酸鉀較廣用之。1mL 血液加入 2 毫克草酸鉀或草酸鈉即可。**

	考題出處:鄭琮霖 生理學實驗
考題21.	白血球(WBC)計試驗中, 稀釋血液時應該是使用何種溶液為佳？ (A)Ringer氏液 (B)Turk氏液 (C)Duke氏液 (D)Hayem氏液 考題正解:(B) 考題詳解: Turk氏液, 稀釋白血球、破壞紅血球, 將剩下的白血球染色。 Hayem氏液, 稀釋紅血球, 且防止紅血球凝固或溶血。 考題出處:生理學實驗-血液生理學 鄭琮霖老師
考題22	22. Which of the following is **NOT** a descriptive term for red cell size? (A) normocytic (B) hypochromic (C) macrocytic (D) microcytic 考題正解:(B) 考題詳解: 描述紅血球大小(RBC size)的單字:**normocytic** (正球性)、**microcytic** (小球性)、**macrocytic** (大球性) (B) **hypochromic (**淺色性**)** 為描述血色素程度的單字 考題出處:蔡志仁老師 血液病理學(一) 紅血球及凝血疾病
考題23	Hypoxic induced fatty change is LEAST likely seen in (A) lung (B) liver (C) myocardium (D) kidney 本題正解:(A) 本題詳解:肺較不易缺氧 考題出處:蔡志仁血液病理學(一) 紅血球及凝血疾病

考題24	which of the followings is not a feaure ofr extravascular hemolysis? (A) anemia (B) jaundice (C) splenomegaly (D) marked increase in haptoglobin 考題正解:(D) 考題詳解:haptoglobin會與hemoglobin結合而下降。 考題出處:蔡志仁老師 血液病理學(一) 紅血球及凝血疾病
考題25	Intravascular hemolysis is LEAST manifested by (A)hemoglobinemia (B)hemosiderinuria (C)phenylketonuria (D)hemoglobinuria 考題正解:(C) 考題詳解:phenylketonuria為代謝疾病 考題出處:蔡志仁老師 血液病理學(一) 紅血球及凝血疾病
考題26	26.In hereditary spherocytosis, spherocytic cells are trapped in the splenic cords and damage by: (A)helper T cell (B)cytotoxic T cell (C)B lymphocyte (D)macrophage 本題正解:D 本題詳解:spherocytic cells會在脾臟被macrophage吞噬 考題出處: 蔡志仁老師–血液病理學-紅血球及凝血疾病上課講義

考題27	27. in hereditary spherocytosis, the morphology of spherocyte is characterized by: (A) small and hypochromic (B) small and hyperchromic (C) large and hypochromic (D) large and hyperchromic 本題正解: B 本題詳解: spherocyte: small, dark-staining (hyperchromic) red cells lacking the normal central zone of pallor 考題出處: 蔡志仁老師–血液病理學-紅血球及凝血疾病上課講義
考題28	28. the Heinz body is composed of: (A) denatured globin (B) copper precipitate (C) viral inclusion (D) silver precipitate 本題正解: A 本題詳解: Heinz body: Denatured Hb in the form of inclusion 考題出處: 蔡志仁 紅血球及凝血疾病
考題29.	In red cells, which of the following protects against oxidant injury by participating as a cofactor in the reactions that directly neutralize compounds such as H2O2? (A) nicotinamide adenine dinucleotide phosphate (NADP) (B) reduced nicotinamide adenine dinucleotide phosphate (NADPH) (C) reduced glutathione (GSH) (D) oxidized glutathione (GSSG) 本題正解:(C)

	本題詳解：Glutathione peroxide converts H_2O_2 to H_2O via GSH, which in turn oxidizes to GSSG. If this process is impaired, then H_2O_2 would accumulate and denature globin chains. 本題出處：病理學vol.1 血液病理學(一)紅血球及凝血疾病 蔡志仁老師
考題30	The hemoglobin in which lysine is substituted for glutamate in the sixth amino acid residue of β-globins is： (A)HbA_2 (B)HbS (C)HbF (D)HbC 本題正解：(D) 本題詳解：別被B騙了，HbS是Valine，HbA_2是兩個δ，HbF是γ 本題出處：病理學vol.1 血液病理學(一)紅血球及凝血疾病 蔡志仁老師
考題31	Kostmann syndrome is characterized by: (A)Ineffective hematopoiesis (B)Suppression of hematopoietic stem cells (C)Inherited defects in specific genes impair granulocytic differentiation (D)Suppression of committed granulocytic precursors by exposure to drugs 本題正解：(C) 本題詳解：Kostmann syndrome是一種先天性白血球缺乏疾病，Promyelocyte 要成熟到 Myelocyte 的過程發生錯誤使白血球無法受cytokine刺激順利成熟。 考題出處：血液學 良性白血球異常 邱世欣醫師
考題32	More than half of T-cell acute lymphoblastic leukemia/lymphoma have gain-of-function mutations in： (A) NOTCH1

	(B) PAX5 (C) E2A (D) EBF 本題正解:(A) 本題詳解:Gain-of-function NOTCH1 mutations are found in 50%-70% of human T cell acute lymphoblastic leukemia/lymphoma (T-ALL) cases 考題出處:http://www.ncbi.nlm.nih.gov/pubmed/18677410
考題33	Histochemical stains for lymphoblasts are: A. myeloperoxidase(-); peropdic acid-Schiff(-) B. myeloperoxidase(-); peropdic acid-Schiff(+) C. myeloperoxidase(+); peropdic acid-Schiff(-) D. myeloperoxidase(+); peropdic acid-Schiff(+) 本題正解:(B) 本題詳解:既然是 lymphoblasts, 則myeloperoxidase就是(-), 所以刪去C、D。lymphoblasts的peropdic acid-Schiff是(+), 所以選B 考題出處:林佩瑾 : 急性白血病及骨髓發育不良症候群
考題34	Which of the followings is a feature for chronic lymphocytic leukemia/small lymphocytic lymphoma? (A) Lymph nodes are diffusely effaced by an infiltrate lymphocytes 14-16Mm in diameter (B) Lymph nodes are devoid of proleferation centers (C) peripheral blood smear reveals smudge cells (D) The spleen is rarely involved 本題正解:(C)

	本題詳解:(C)即為CLL的定義特徵 考題出處:林佩瑾 : 急性白血病及骨髓發育不良症候群
考題35	Which of the following is strongly associated with chromosomal translocations involving BCL2 ? (A) B-cell acute lymphoblastic leukemia/lymphoma (B) follicular lymphoma (C) extranodal marginal zone lymphoma (D) mantle cell lymphoma 考題正解: (B) 考題詳解: CD19, CD20, CD10, BCL6, BCL2皆是Follicular lymphoma的markers , 診斷困難時會以較特異性BCL2做鑑別診斷。 考題出處: 病理學 Vol.2 血液病理學(二)白血球及淋巴結疾病 蔡志仁老師
考題36	Tumor cells of diffuse large B-cell lymphoma are MOST likely characterized by: (A) two to three times the diameter of a small lymphocyte; inconspicuous nucleoli (B) two to three times the diameter of a small lymphocyte; prominent nucleoli (C) four to five times the diameter of a small lymphocyte; inconspicuous nucleoli (D) four to five times the diameter of a small lymphocyte; prominent nucleoli 考題正解:(D) 考題詳解:Diffuse large B-cell lymphoma的morphology包括 1) Relatively large cell size (usually four to five times the diameter of a small lymphocyte) 及 2) Diffuse pattern of growth. 考題出處:病理學 Vol.2 血液病理學(二)白血球及淋巴結疾病 蔡志仁老師
考題37	Which of the followings is **MOST** likely associated with Epstein-Barr virus infection?

	(A)mantle-cell lymphoma (B)follicular lymphoma (C)diffuse large B-cell lymphoma (D)Burkitt lymphoma 本題正解:(D) 本題詳解:EBV感染與HLH、African Burkitt lymphoma、extanodal NK/T-cell lymphoma、少部分Sporadic Burkitt lymphoma以及少部分Hodgkin lymphoma發生相關 本題出處:蔡志仁老師 血液病理學(二)白血球及淋巴結疾病
考題38	38. The nuclear globular inclusions in the plasma cells are known as: (A) antibodies (B) tingible bodies (C) Russell bodies (D) Dutcher bodies 本題正解:(D) 本題詳解:Russell bodies位在細胞質, Dutcher則位在細胞核 本題出處:蔡志仁老師 白血球及淋巴結疾病
考題39	39. Virtually all mantle cell lymphomas have an (11;14) translocation that leads up-regulation of cyclin D1 which promotes: (A) transcription factors that influence self-renewal (B) pro-survival mutation (C) G1- to S-phase progression during the cell cycle (D) tumor cells apoptosis 本題正解:(C) 本題詳解:cyclin 是參與細胞週期重要的蛋白, 負責調控進入細胞週期的各階段。 本題出處: 蔡志仁老師 血液病理學-白血球及淋巴結疾病
考題40	下列何種檢驗可提供對於貧血病人之初步鑑別診斷之依據?

	(A) mean corpuscular volume (MCV) (B) 血液抹片之直接形態學觀察 (C) 計算reticulocyte production index (D) 以上皆是 本題正解: (A or D) 本題詳解: 雖然MCV,血液抹片形態學觀察和RPI皆可判斷貧血的類型,但最初步的鑑別診斷,捐血時所獲得的MCV是最先能得到資訊,故最後答案是給(A) and (D) 本題出處: 劉益昌老師 紅血球疾病 (I) 貧血概論,再生不良性貧血,營養性貧血
考題41.	欲鑑別診斷iron deficiency anemia與anemia of chronic inflammation or infection, 下列何者最能區別出這兩者之差異？ (A) hemoglobin (B) mean corpuscular volume (C) serum iron (D) serum ferritin 本題正解:(D) 本題詳解: • Differential diagnosis with iron-deficiency anemia is important – Low serum iron, low transferrin saturation (around 15-20%), hypoproliferative marrow – Normal or increased serum ferritin 本題出處: 劉益昌老師 紅血球疾病 (I) slide 20

考題42.	42. 一位34歲女性, 無全身性疾患, 3年前體檢時血紅素(hemoglobin)值為12.8 g/dL, MCV(mean corpuscular volume)為 89 fL(正常值80~100)。但今年體檢發現血紅素9.4 g/dL, MCV為66 fL, 白血球及血小板數目均正常。下列何者最有可能為此病患之疾病？ (A) 缺鐵性貧血 (B) 海洋性貧血 (C) 再生不良性貧血 (D) vitamin B12 缺乏性貧血 本題正解:(A) 本題詳解:MCV<80 血紅素<12 可知為microcytic, hypochromatic anemia, 病人年紀應不會是海洋性貧血, 可推論為IDA。 本題出處: 黃莉文老師 貧血疾病之實驗室檢查要點
考題43.	對於貧血病人的評估, 下列因素均可能決定每位病人對於貧血的反應, 何者除外? (A)severity of anemia (B)rapidity of onset of anemia (C)comorbid conditions (D)以上皆是 本題正解:(D) 本題詳解:以上因素都有可能造成貧血, 而且不同的病因造成的貧血反應不同。 本提出處:劉益昌老師 臨床問診
考題44.	44.對於貧血病人的physical examination, 下列何者不會出現？

	(A)pale conjunctiva (B)icteric sclera (C)heart murmur (D)以上皆可能出現 本題正解:(D) 本題詳解:以上physical examination都有可能出現於貧血病患 **Physical examination in hematological field** • General appearance – Pallor and flushing – Cyanosis – Jaundice – Petechiae and ecchymosis • Skin and mucosa – Nails – Leg ulcers • Conjunctiva • Sclera • Mouth and oral cavity • Lymph nodes • Chest – Heart murmur • Spleen • Liver • Nervous system • Joints 本提出處:劉益昌老師 臨床問診
考題45	45. 對於懷旋Bleeding disorder病人的History taking, 下列何者並非必要？ (A) 出血的部位及型態 (B) 家族史

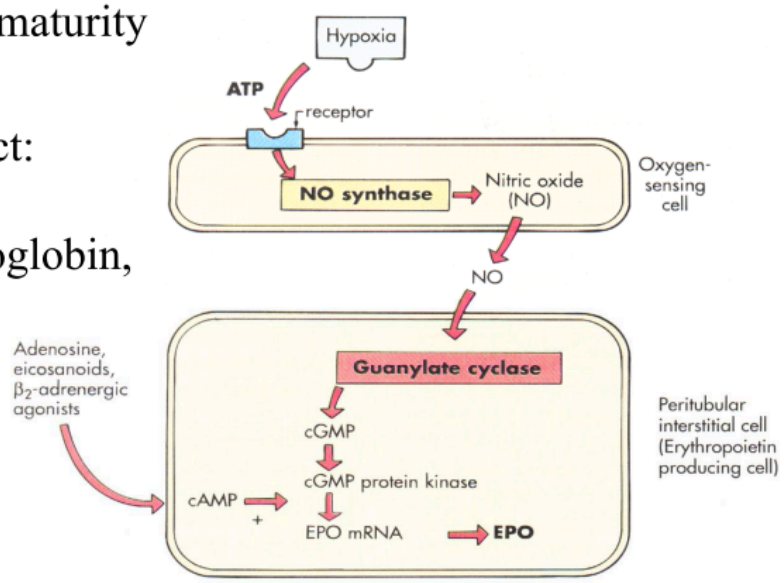
	(C) 目前使用的藥物 (D) 以上皆需要 本題正解:(D) • Patterns of bleeding • Sites of bleeding • Amount and duration • Family history • Co-existing infection or inflammation • Senile purpura 本題詳解: 本題出處:劉益昌老師 臨床問診
考題46	46. 慢性腎衰竭往往導致何種貧血？ (A) 正球性貧血 (B) 大球性貪血 (C) 小球性貧血 (D) 溶血性貧血 本題正解:(A) 本題詳解:腎臟衰竭的病患因紅血球生成素 (EPO) 分泌不足, 容易造成正球性貧血。 本題出處:黃莉文老師 血液疾病實驗室檢查要點1-貧血疾病之實驗室檢查要點
考題47	47.一病患的RBC : 5X10^6/μL ; Hct:33% ; RDW : 14.2% ; HbA2 : 2.0% ; serum iron : 110μg/dL , 則此人最可能的診斷為何種貧血？ (A)IDA (B)α-thalassemia

	(C)β-thalassemia (D)anemia of chronic disease 考題正解:(B) 考題詳解:RDW(12-15%)正常=>排除IDA HbA2(<3.5%)正常=>排除β-thalassemia serum iron(35-150μg/dL)正常=>排除anemia of chronic disease 考題出處:血液病理學(一)紅血球及凝血疾病 蔡志仁老師
考題48	下列何者不是 megaloblastic anemia 之血液變化 : (A) macrocytic RBC (B) reticulocyte (C) hypersegmented neutrophil (D) 骨髓出現 micrometamyelocyte 考題正解:(D) 考題詳解:ABC皆為典型的病理觀察 考題出處:血液病理學(一)紅血球及凝血疾病 蔡志仁老師
考題49	49. 下列何種凝血因子異常無法以PT或APTT測出？ (A) Factor VIII (B) Factor IX (C) Factor V (D) Factor XIII 本題正解:(D) 本題詳解:Factor XIII為成為stable fibrin的步驟, 不在extrinsic or intrinsic pathway 裡面

	本題出處:血液疾病實驗室檢查要點2-凝血疾病之實驗室檢查要點 黃莉文老師
考題50	50. 急性免疫性血小板缺乏紫斑症(Autoimmune thrombocytopenic purpura)病人之出血時間(Bleeding time)延長, 是因為: (1)血小板醣蛋白受體被抗體結合 (2)自體免疫影響凝血因子活性 (3)血小板數目減少 (4)發生血液凝固活化而消耗血小板 (A)1,3 (B)2,4 (C)1,4 (D)2,3 本題正解:(A) 本題詳解:血小板缺乏紫斑症有抗血小板的抗體(IgG class)產生, 抗體接上血小板膜蛋白(IIb-IIIa or Ib-IX)後, 血小板會被循環中的吞噬細胞破壞, 造成血小板過少。 本題出處:血液疾病實驗室檢查要點2-凝血疾病之實驗室檢查要點 黃莉文老師＆血液病理學(一)紅血球及凝血疾病 蔡志仁老師
考題51	51. PT, aPTT皆延長患者之血漿, 加入正常血漿或吸收血漿(absorbed plasma)皆可補正, 此可能為缺乏何種凝血因子？ (A) Factor V (B) Factor VIII (C) Factor II (D) Factor X 考題正解:(A) 考題詳解:黃莉文老師講義中第C頁, PT, aPTT皆延長代表共同路徑中的factor X, V, II, I, 可以有問題, 所以B不選;另外absorbed plasma是以BaSO4·Al(OH)3

	處理後, 缺乏factor II, VII, IX, X, 所以加入absorbed plasma可以補正, 代表患者血漿內部不缺乏factor II, VII, IX, X, 所以C,D不選 考題出處:血液疾病實驗室檢查要點2-凝血疾病之實驗室檢查要點 黃莉文老師
考題52	52. 某32歲年輕女性, 在一次健康體檢中, 無意間發現她的Hb 13.2 /dL, platelet 230 k/μL, WBC 2300/μL, neutrophil 25%, lymphocyte 70%, eosinophil 2%, monocyte 3%, 則此病人有下列何種狀況?選出最佳答案 (A)有leukopenia (B)有monocytosis (C)有leukopenia、無lymphocytosis (D)有leukopenia、有lymphocytosis 考題正解:(C) 考題詳解:正常情況下WBC: 4000-11000/μL , neutrophil 50-70%,eosinophil 2-4%, monocyte 3-8%, 因此有leukopenia; 但lymphocytosis部分較模糊, 若是absolute lymphocytosis則定義為>4000/μL, relative lymphocytosis則定義為只要lymphocyte>40%即可 考題出處:白血球疾病 白血球良性異常 邱世欣老師
考題53	在FAB的急性骨髓性白血病(AML)的分類中, 下列何種亞型呈現myeloperidase細胞染色陰性, 但免疫分型顯示為骨髓性來源? (A) AML M0 (B) AML M1 (C) AML M4 (D)AML M6 考題正解:(A) 考題詳解: 3. 老師都有大略提過去。Myeloperoxidase 在 M0 時可能染不太出來，M1 可能只有部分細胞染得出來；Suden Black B 是最 specific 的；M4、M5 靠的就是 None Specific esterase；Periodic acid-shiff 則可以幫助判斷 M6。 考題出處:白血球疾病 白血球良性異常 邱世欣老師
考題54	下列有關 t(15:17) 急性白血病的敘述, 何者錯誤？

	A) 是一種 acute promyelocytic leukemia B) imatinib 是主要的治療藥物 C) chloroacetate esterase stain 呈現陽性 D) 一般來說有比較好的預後 (prognosis) 考題正解:(B) 考題詳解:imatinib 是治療 CML 的藥物 考題出處: 白血球疾病 急性白血球及骨髓發育不良症候群 林佩瑾老師
考題55	Which one belongs to oral iron chelator? A) Deferoxamine B) Deferasirox C) Transferrin D) Transcobalamin II 考題正解:(B) 考題詳解:Deforoxamine is an IV iron chelator, Deferasirox is the first oral iron chelator. 考題出處: Pharmacology Vol. 2
考題56	which one used for treatment of anemia ,but it can induce hypertesion and thrombotic complication? (A)ferrous sulfate (B) Vit. B12 (C) Folic acid (D)EPO 考題正解:(D)

	考題詳解: 3.Clinical Pharmacology (1) availability for **chronic renal failure** patients (2) IV or SC EPO 50-150 IU/kg, 3 times/week → ↑ hematocrit and hemoglobin (3) use for the anemia produced by zidovudine (HIV p't) and anemia of prematurity 4.Toxicity The most adverse effect: (1) a rapid increase in hematocrit and hemoglobin, (2) hypertension and thrombotic complications  EPO 若使過多紅血球生成, 可能導致血管栓塞, 並因此造成高血壓。 考題出處: Pharmacology Vol. 1 葉竹來老師貧血治療藥物 Agents Used in Anemias ;Hematopoietic Growth Factors
考題57	Which one's structure belongs to nonglycosylated peptide and use for neutropenia patients? (A) Thrombopoietin (B) Sargramostim (C) Filgrastim (D) Oelteparin 本題正解:C 本題詳解: G-CSF (rHuG-CSF ; Filgrastim):由細菌合成, 結構為nonglycosylated peptide。可以促進neutrophil吞噬作用的活性與延長neutrophol的壽命。移植時可投予, 刺激病人骨髓生成neutrophil, 增加其免疫力。

	考題出處:葉竹來 貧血藥物
考題58	58. Which one has the longer half-life than others? A) Heparin B) Enoxaparin C) Fondaparineux D) Delteparin 本題正解:C 本題詳解: Fondaparineux 半衰期最長 可達15 小時 考題出處:葉竹來 凝固血液疾病藥理學
考題59	59.Which one was the oral direct thrombin inhibitor? (A)Argatroban(B)Bivalirudin(C)Dabigatran(D)Rivaroxaban 本題正解:C 本題詳解:Dabigatran 是口服的直接抑制thrombin 考題出處:葉竹來 凝固血液疾病藥理學
考題60	60.Which one can induce serious interactions with warfarin through the inhibition of oxidative metabolic transformation in liver? (A) Metronidazole (B)Aspirin (C)Cephalosporins (D)Cholestyramine 本題正解:(A) 本題詳解: metronidazole oral increases levels of warfarin oral by slowing drug metabolism. 考題出處:葉竹來 凝固血液疾病藥理學
考題61	61.Which one can block the ADP receptor on platelet and induce leukopenia? (A) Aspirin (B) Clopidogrel (C) Dipyridamole (C) Tirofiban 本題正解:(B) 本題詳解: Clopidogrel的作用在血小板的ADP receptor, 並會造成白血球低下。 考題出處:葉竹來 凝固血液疾病藥理學

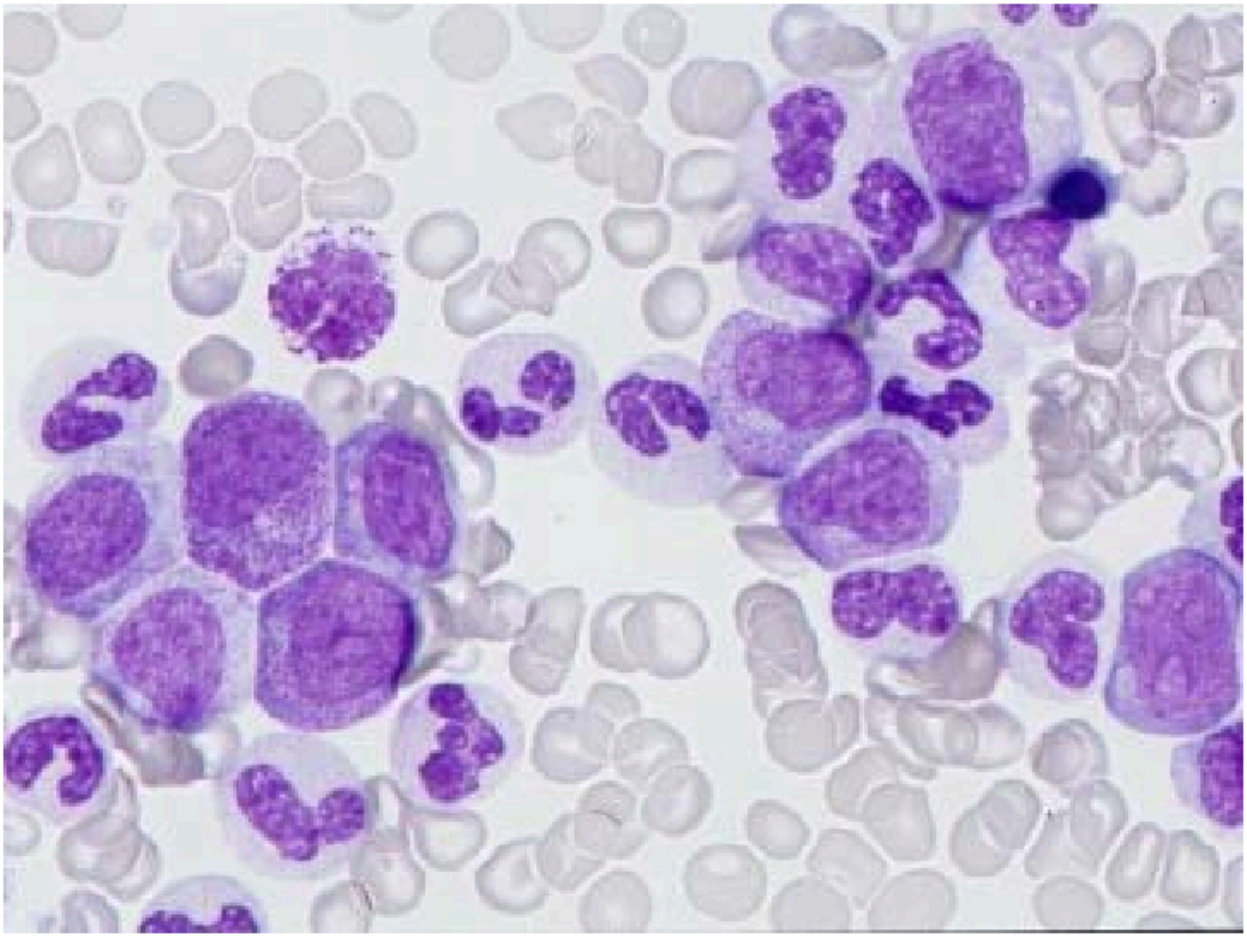
<table>
<tr>
<td>考題62</td>
<td>62.Which one is wrong?
(A)UFH with high affinity for antithrombin markedly inhibit blood coagulation.
(B)Enoxaparin can inhibit activated factor X but has less effect on thrombin than heparin.
(C)LMW heparins have less bioavailability from the subcutaneous site of injection than UFH.
(D)LMW heparins are cleared more rapidly than UFH.
本題正解:C/D
本題詳解:
生物可利用率(Bioavailability)：低分子量較高分子量好吸收。
小結：臨床上傾向於用低分子量的 Heparin。其吸收較好，作用時間長(因為難以清除)，副作用較低，相對較安全，但藥理作用比較弱(只作用在 Xa)。
(整理)高分子量與低分子量的比較
<table>
<tr><th></th><th>高分子量 Heparin</th><th>低分子量 Heparin</th></tr>
<tr><td>抗凝作用</td><td>強→IIa、IXa、Xa</td><td>弱→Xa</td></tr>
<tr><td>清除率</td><td>快→作用時間短</td><td>慢→作用時間長</td></tr>
<tr><td>抑制血小板(副作用)</td><td>強</td><td>弱</td></tr>
<tr><td>吸收率</td><td>低</td><td>高</td></tr>
<tr><td>選擇性</td><td>低</td><td>高</td></tr>
</table>
本題出處:葉竹來老師, 藥理學Vol2-凝血疾病治療藥物</td>
</tr>
<tr>
<td>考題63</td>
<td>63. Which one is a peptide structure can inhibit ligand binding to the IIb/IIIa receptor of platelete?
(A)Abcximab (B)ptifibatide (C)Tirofiban (D)Ticlopidine

本題正解:B
本題詳解: Three commercially available intravenous Gp IIb/IIIa inhibitors:
1.Abciximab 2.Eptifibatide 3.Tirofiban</td>
</tr>
</table>

	其中, Eptifibatide is an analog at the extreme carboxyl terminal of the delta chain of fibrinogen – mediate the binding of fibrinogen. 有peptide structure 本題出處:葉竹來老師, 藥理學Vol2-凝血疾病治療藥物
考題64	64. Which one is Not true about Non-Hodgkin lymphoma ? (A) Non-Hodgkin lymphoma could be divided into B cell- or T cell-derived (B) Could be divided into aggressive type and indolent type for therapeutic consideration (C) The optimal therapy for aggressive NHL should be systemic chemotherapy (D) Monoclonal antibody, Rituximab, aims for T cell lymphoma **本題正解**:(D) **本題詳解**:(D) Monoclonal antibody, Rituximab (anti-CD20), aims for B cell lymphoma, not T cell lymphoma. **考題出處**:蕭惠樺老師 血液學-惡性淋巴瘤和多發性骨髓瘤 p. 21
考題65	65. A 45 years old male patient suffered from multiple lymphadenopathy over neck and inguinal areas. Pathology of lymph node biopsy revealed diffuse large B cell lymphoma. BM exam showed no marrow involvement. Image study demonstrated multiple lymph nodes over neck, mediastinal, abdomen and inguinal areas. LDH level is >2 of normal ranges. His performance status showed ECOG of 0. What is the staging of this patient? 本題正解: (C) 本題詳解: 本案例的淋巴腫大區域已跨越橫膈膜(脖子到鼠蹊都有, 若只局限於一側為第二期), 但還未波及其他器官(若波及則為第四期), 由分期表的定義可知為第三期。

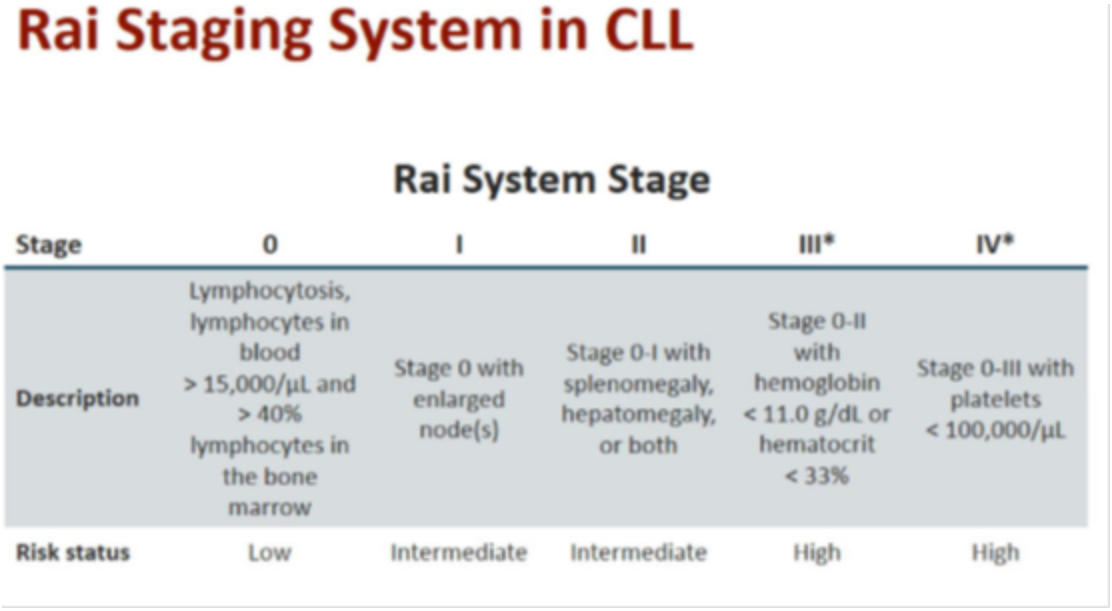
	考題出處: 蕭惠樺老師 血液學-惡性淋巴瘤和多發性骨髓瘤
考題66	66. What is the best therapy for this patient now? (A) Observation (B) radiation (C) systemic chemotherapy (D) stem cell transplant 本題正解: (C) 本題詳解:因為病人是屬於stage III, 所以需要做化療。如果是在stage I or II的病患可以觀察就好或是做局部放射線治療。 考題出處: 蕭惠樺老師 血液學-惡性淋巴瘤和多發性骨髓瘤
考題67	67. 輸血時需要考慮那些點?(選一個最適合答案) (A) Indication (適應症) (B) Which component of blood (血品成分) (C) Blood type (血型) (D) Side eddects (副作用) (E) 以上皆是 本題正解: (E) 本題詳解: 選項裡都是必須要列慮考慮的因子 考題出處: 輸血醫學 蕭惠樺老師
考題68	68.何者非免疫性輸血反應?(選一最適合答案) (A)溶血性輸血反應(hemolytic transfusion reaction) (B)循環超載(fluid overload) (C)輸血相關之呼吸窘迫症(TRAL1) (D)輸血後紫斑症(purpura) 本題正解: (B)

	本題詳解:非免疫性輸血反應包含傳染病、循環超載、電解質不平衡、鐵質過量等 考題出處: 輸血醫學 蕭惠樺老師
考題69	關於溶血性輸血反應, 何者為非? (A)需要趕快停止輸血, 並給予輸液 (B)最常見的原因是人為錯誤 (C)需要趕快做血液的後續調查 (D)大多是不可避免的原因造成的 本題正解:(D) 本題詳解:大多是人為疏失所以輸血時每個步驟都要小心, 隨時注意就可以避免大部分溶血性輸血反應 考題出處:蕭惠樺老師 輸血醫學
考題70	Peripheral smear reveal leukocytosis with various stages of myeloid cells is the charateristic of (A) AML (B) ALL (C) CML (D) CLL 本題正解: (C) 本題詳解:

	 CML: leucocytosis with various stages of myelo series seen 考題出處: 陳百薰老師 臨床技能- 血液及生化數值分析
考題71	71.A 12 years old boy had fever,pus coated tonsils , mild leukocytosis with SGPT of 120, the he si mostly due to (A) EBV inection (B)Adno viral infection (C) Group A Steptococcus infection (D) Group B Steptococcus infection 考題正解:(A) 考題詳解: 急性扁桃腺發炎, 可能為細菌感染、病毒感染兩大類, 細菌感染主要為Group

	A Steptococcus infection。病毒感染主要為EBV、Adenovirus、Herpes simplex，感染性的單核球增多症，特別以EBV病毒為主。若測得Anti strep.LstinO(ASLO)數值偏高，代表鏈球菌感染。 考題出處：臨床技能- 血液及生化數值分析 陳百薰老師
考題72	In the new born period, if the electrophoresis shows Hb Bart's or HbH, then the infant is mostly due to (A) beta thalassemia (B) alpha thalassemia (C) both (D) neither 本題正解：(B) 本題詳解： α-thalassemia病人由於作不出α鍊，在嬰兒時期會出現 HbH (β_4)、Hb Bart's (γ_4，四條都是γ鍊)，通常在新生兒時期就會出現hydrops fetalis(胎性水腫)，壽命極短。 考題出處：陳百薰老師 臨床技能- 血液及生化數值分析
考題73	Dilutional hyponatremia can be found in the followings, except (A) nephrotic syndrome (B) cirrhosis (C) congestive heart failure (D) colon cancer 本題正解：(D) 本題詳解：colon cancer並不會造成dilutional hyponatremia 考題出處：陳百薰老師臨床技能血液生化分析
考題74	metabolic acidosis can be found in the followings, except (A) methanol poisoning (B) acetaminophen poisoning (C) diabetic ketoacidosis

	(D) lactate over production 考題正解:(B) 考題詳解:acetaminophe並非酸性物質, 無法造成metabolic acidosis 考題出處:陳百薰老師 臨床技能- 血液及生化數值分析
考題75	Auer rod in peripheral smear can be seen in the case of (A)AML (B)ALL (C)CML (D)CLL 考題正解:(A) 考題詳解:auer rod是AML M3的特徵。 考題出處:陳百薰老師 臨床技能- 血液及生化數值分析
考題76	76.Which one of the following cytogenetic change in CLL patients is the most benign for prognosis? (A)del(13q14) (B)del(11q) (C)del(17p) (D)trisomy12q 本題正解: A 本題詳解: 出現del(13q14)的cytogenetic change的預後較好 考題出處: 林勝豐老師 – 血液學 –慢性白血病上課講義
考題77	77. a patient was diagnosed with CLL, he suffered from multiple lymphadenopathy over whole body without anemia, thrombocytopenia and hepatosplenomegaly. According to Rai's staging system, which stage he is?

	(A) stage 0 (B) stage Ⅰ (C) stage Ⅱ (D) stage Ⅲ (E) stage Ⅳ 本題正解: B 本題詳解:  **Rai Staging System in CLL** **Rai System Stage** **Stage** 0 I II III* IV* **Description**: Lymphocytosis, lymphocytes in blood > 15,000/µL and > 40% lymphocytes in the bone marrow; Stage 0 with enlarged node(s); Stage 0-I with splenomegaly, hepatomegaly, or both; Stage 0-II with hemoglobin < 11.0 g/dL or hematocrit < 33%; Stage 0-III with platelets < 100,000/µL **Risk status**: Low; Intermediate; Intermediate; High; High 考題出處: 林勝豐老師 – 血液學 –慢性白血病上課講義
考題78	78.which of the followings are the initial drugs of choice in CML chronic phase? (1) Imatinib (2) Dasatinib (3) Ponatinib (4) Nilotinib (A) 1+2+3 (B) 1+2+4 (C) 2+3+4 (D) 1+3+4 本題正解: B 本題詳解: 治療目前以TKI為首選, 以Imatinib, Nilotinib, Dasatinib.為主 考題出處: 林勝豐 慢性白血病
考題79	以下何者不屬於出血疾病(bleeding disorders)相關的實驗室檢測? (A) PFA (platelet function assay) (B) CBC/DC (complete blood count and WBC differential count) (C) Coomb's test (D) PTT (partial thromboplastin time)

	考題正解:(C) 考題詳解:Coomb's test is used to diagnose autoimmune hemolytic anemia (AIHA), a red blood cell disorder. 考題出處:血液疾病實驗室檢查要點vol.1 貧血疾病之實驗室檢查要點 黃莉文老師
本題80	Hemophilia usually refers to congenital deficiency of FVIII or FIX.以下敘述何者為非？ (A)Hemophilia A and B are X-linked recessive disease. (B)Hemophilia A and B exhibit a range of clinical severity that correlates well with assayed factor levels. (C)Clinical severity does not correlate well with factor level in rare clotting factor deficiency (ex. Factor VII deficiency) . (D)Hemarthosis is the most characteristic symptom of Idiopathic thombocytopenia purpura(ITP) 本題正解:(D) 本題詳解: (A)皆為隱性疾病 (B) HA and HB exhibit a range of clinical severity that correlates well with assayed factor levels. (normal FVIII/FIX activity: 50~150%) (C)較稀有的凝血因子其濃度和臨床表現較無相關性 考題出處:血液學　林珮瑾老師
考題81	關於Hemophilia A and B 的治療, 以下敘述何者為非? (A)The goal of prophylaxis therapy is to maintain the nadir FⅧ or FⅨ level above 1%,which can preserve a near normal musculoskeletal development. (B)Rehabilation is prohibited in patients with hemophilia because of the bleeding tendency and easy hemathrosis (C)Immune tolerance therapy is a treatment modality for patient with hemophiliaA

	and FVⅢ inhibitors (D)Prophylaxis therapy can markedly improve the psychosocial development and life quality in patient with hemophilia. 本題正解:(B) 本題詳解:關節出血容易使關節活動出問題, 所以適度的復健是必要的。 考題出處:血液學 血液凝固疾病 林珮瑾老師
考題82	急性骨髓性白血病 (Acute myelogenous leukemia) 的分型依 FAB classification 分為 M0~M7, 下列對於各型的敘述何者為是? (A) M7 為 Megaloblastic leukemia (B) M0 為 hypergranular promyelocytic leukemia, 又稱為 APL (acute promyelocytic leukemia) (C) M4 為 erythroleukemia (D) M2 為 myelomonocytic leukemia 本題正解:(A) 本題詳解: M0:without maturation M1:minimally differentiated M2:with maturation M3:hypergranular promyelocytic M4:myelomonocytic M5:(a) monoblastic (b) monocytic M6:erythroleukemia M7:megakaryoblastic Rare type, e.g. eosinophilic 考題出處:急性白血病及骨髓化生不良症候群 林佩瑾老師
考題83	在急性白血病中常會有染色體轉位, 下列敘述何者有誤?

	A. t(15;17); PML-RARα 常見於AML, M3 B. t(12:21): TEL-AML1常見於急性骨髓性白血病(AML) C. t(8:21); AML-ETO 常見於AML(M2) D. t(9;22); BCR-ABL 常見於慢性骨髓性白血病(CML) , 亦可在急性白血病出現此變異 本題正解:(B) 本題詳解:t(12:21): TEL-AML1常見於pediatric acute lymphoblastic leukemia 考題出處:急性白血病及骨髓化生不良症候群 林佩瑾老師
考題84	骨髓化生不良症候群(Myelodysplasia syndrome, MDS)包含一群複雜的骨隨疾病, 以下關於MDS之敘述何者為非？ (A) Patients with MDS typically show persistent(>6mths) unexplained cytopenias, majority present with anemia (B) MDS中特定的cytogenetic alterations有不同的預後意義, 例如del(11q)是very good prognosis group;同時有3個以上的abnormalities則是very poor prognosis (C) MDS分型中, RAEB(refractory anemia with excess blasts)的特徵是周邊血球低下, 骨髓中母細胞(blasts)比例超過20% (D) MDS之治療分歧很大, 從supportive care到intension chemotherapy或HSCT都為治療之選擇, 而偎依可以curative option是aloogenic HSCT 考題正解: (C) 考題詳解:(C) 選項比例應為5-20% 考題出處: 血液學 Vol.6 白血球疾病(ㄧ) 白血球良性異常 邱世欣 老師
考題85	下列哪些狀況和neutrophil leukocytosis 較無關？ (A) Leukemoid reaction (B) Staphyllococcus infection (C) Corticosteroid treatment (D) Toxic granules in neutrophils

	(E) B12 deficiency 考題正解: (E) 考題詳解: (A)(B)(C)(D)皆為嗜中性球上升的原因, vitamin B12 or folate deficiencies會造成白血球降低。 考題出處: 血液學 Vol.6 白血球疾病(丨) 白血球良性異常 邱世欣 老師
考題86	下列何者neutrophil qualitative disorder與superoxide產生異常較有關? (A) Hyperimmunoglobulin E syndrome (B) Leukocyte adhesion deficiency (C) Chediak-Higashi Syndrome (D) Chronic granulomatous disease (E) Myeloperoxidase disease 考題正解: (D) 考題詳解: Chronic granulomatous disease的etiology為 “Inability to kill catalase positive organisms because of mutations in NADPH oxidase pathway. Superoxide cannot be generated by the neutrophils.” 考題出處: 非惡性白血球異常 邱世欣老師
考題87	下列何者與 infectious mononucleosis 病況較無關? (A)Atypical lymphocyte ≧ 20% (B)Epstein-Barr virus infection (C)Atypical lymphocyte 以 B 細胞為主 (D)具 nature killer cell activity (E)T 細胞無 EB virus infection 考題詳解:雖然只有B cell表現EBV receptor所以先轉變為Atypical lymphocyte, 但是T cell之後也會被病毒抗原刺激轉變成Atypical lymphocyte, 所以Atypical lymphocyte包含B 細胞以及T 細胞

	考題正解:(C) 考題出處: 邱世欣醫師 白血球良性異常
考題88	88. 下列何者與spherocytosis較無關？ (A) Red cell membrane spectrin deficiency (B) High MCHC (mean corpuscular hemoglobin concentration) (C) Abnormal RBC osmotic fragility test (D) Autoimmune hemolytic anemia (E) Gain of red cell membrane 本題正解:(E) 本題詳解:gain要改成lose 本題出處:邱世欣老師　溶血性貧血
考題89	89. 下列何者與G6PD缺乏較無關？ (A) 3% Chinese male population (B) RBC damaged by oxidation stress (C) Echinocyte red blood cell (D) Heinz body in red blood cell (E) Favism 考題正解: (C) 考題詳解:Echinocyte red blood cell是和 pyruvate kinase 的缺陷有關。 考題出處: 邱世欣老師　血液學-溶血性貧血
考題90	90. 下列何者與thalassemia較無關? (A) Microcytic, hypochromic RBC (B) 台灣已b-thalassemia minor較多 (C) 紅血球中a或b globin chain缺乏 (D) 重型b-thalassemia major其Hb level<7gm/dl (E) 有ineffective erythropoiesis

	考題正解: (B) 考題詳解: 地中海型貧血是一種血紅素a, b chain有缺陷的小球性貧血(microcytic and hypochromic),首先會因為缺乏正常a or b chain,導致另一個正常的chain就會過多而形成沈澱物沈澱在紅血球,若沈澱在循環中的紅血球會導致紅血球在RES中破裂,若在骨髓中的前驅紅血球沈澱,則會導致前驅細胞受損而無法形成紅血球,而導致無效的造血(ineffective erythropoiesis),重型b-thalassemia major其血紅素Hb level<7gm/dl.以疾病分佈上來講,台灣是以a-thalassemia為佔多數,所以(B)選項錯誤 考題出處:邱世欣老師 血液學-紅血球疾病(二) 溶血性貧血