

JOURNAL-BASED LEARNING EXERCISES



Each article's contents should be read, researched and understood, and you should then come to a decision on each question. The pass mark is 17 out of 20 questions answered correctly. JBL exercises may be completed at any time until the published deadline date. Please select your choice of correct answers and complete the exercises online at: www.ibms.org/cpd/jbl

DEADLINE WEDNESDAY 7 NOVEMBER 2018

Patient blood management and the importance of the Transfusion Practitioner role to embed this into practice. Bielby L, Moss RL. <i>Transfus Med</i> 2018; 28 (2): 98–106. Assessment No 080218		Immunohistochemistry on old archival paraffin blocks: is there an expiry date? Grillo F, Bruzzone M, Pigozzi S et al. <i>J Clin Pathol</i> 2017; 70 (11): 988–93 (http://jcp.bmj.com/content/70/11/988). Assessment No 080718	
01	Patient blood management (PBM) is a widely established international initiative, with a multidisciplinary approach to increase transfusion.	01	Formalin-fixed, paraffin wax-embedded (FFPE) tissue blocks are the standard archived system in the pathology laboratory.
02	The majority of transfusion practitioners (TPs) were registered nurses or biomedical scientists, but others have a midwifery, operating department practitioner or scientific research background.	02	Humidity can decrease section antigenicity as early as two months after sectioning.
03	Implementing PBM programmes has shown no significant improvement in either patient outcomes or cost reductions.	03	This study shows that antigenicity in stored paraffin blocks is preserved at least for several years.
04	In terms of patients, the National Health Service 2010 white paper promoted the message "no decision without me".	04	For some neoplasms, recurrences may present decades later when new treatments are available. Treatment choices may be dependent on biomarkers which may be evaluated on old archived FFPE tissue.
05	Idiopathic anaemia is a condition of unknown aetiology.	05	Gastro-entero-pancreatic neoplasms have their grade based on the proliferation index identified by Ki-67 immunostaining.
06	There is increasing evidence that pre-operative anaemia is associated with a higher risk of complications, prolonged hospital stay, transfusion requirement and mortality.	06	Four membrane-bound antibodies were used in the study of antigenicity.
07	It is important that a TP has the ability to communicate and work effectively with a multidisciplinary team.	07	All antibodies used in the study had either heat or enzyme pretreatment.
08	The multidisciplinary team would include healthcare professionals who are clinical, nursing, laboratory and pharmacy staff, as well as the TP, and may also include the patient's GP.	08	All immunohistochemistry (IHC) reactions were performed within a week of sectioning.
09	The UK National Comparative Audit (NCA) has demonstrated that up to 30% of blood is used inappropriately.	09	Only one of the cases from the 1970s had staining intensity graded equal to the positive controls.
10	PBM programmes have shifted the tolerance to lower haemoglobin (Hb) levels, where symptoms are treated, rather than the Hb level.	10	All LCA staining from 1980 onwards showed equivalent immunoreactivity on the test sections and the controls.
11	Point-of-care (POC) testing is increasingly reported as a tool used in PBM, especially viscoelastometry, for coagulation testing.	11	Homologous staining results were seen for cytokeratin markers for all cases.
12	Mapping the patient flow from the time of the decision for surgery to their admission to the operating suite would in no way help determine where and what opportunities are available to assess patients for anaemia.	12	Ki-67, CD31, CD34 and LCA showed variable, age-related immuno signal decay.
13	The introduction of a single-unit transfusion policy has reduced blood costs and unnecessary transfusions, and has also reduced the risk of reactions, particularly transfusion-associated circulatory overload (TACO).	13	Ki-67 staining was not improved by deeper sections of the paraffin block.
14	Although the use of red cells generally has decreased over the last several years, the same cannot be said for the use of group O, D-negative red cell units.	14	Longer heat pretreatment protocols had no effect on the intensity of Ki-67 staining.
15	The TP plays only a passive role in auditing appropriate transfusion practice to guidelines.	15	Cytoplasmic antigenicity is maintained in FFPE material for 60 years or more.
16	Single-unit transfusion applies to all patients, irrespective of whether they are stable, normovolaemic adult inpatients, who do not have evidence of clinically significant bleeding or are bleeding in theatre.	16	Slight antigen decay begins after 25–30 years for antigens localised on the cell membrane.
17	PBM has a long history, with much of the early work undertaken in America and Canada to reduce blood loss in surgery.	17	Water content, both endogenous and exogenous, is a proven factor in antigen decay.
18	The use of an electronic prescribing system has demonstrated a reduction in the use of blood.	18	Oestrogen and progesterone receptor demonstration is unaffected by immunosignal loss in older archival blocks.
19	TPs have been publishing their work for years, but it has largely been ignored.	19	Café-au-lait staining patterns were not seen with Ki-67 immunoreactivity.
20	When PBM was launched in the UK, the role of the TP was identified as part of the structure required to drive it forward.	20	The minimum tissue block legal retention period in Italy is 30 years.

REFLECTIVE LEARNING

01	Outline the management of anaemia and haematinic deficiencies in pregnancy and post-partum.	01	What improvements to the study could you identify?
02	Outline the cornerstones of patient blood management in surgery.	02	What methods of validation are/should be used in your laboratory on aged blocks? What would this mean in practice?