## Purpose of this report

The purpose of this report is to provide feedback to the pediatric hematology-oncology community regarding content areas of strength and weakness, information which may be useful for identifying potential gaps in knowledge and guiding the development of educational materials. Using data from the American Board of Pediatrics' (ABP) Maintenance of Certification Assessment for Pediatrics (MOCA-Peds), this report summarizes diplomate performance on the questions within each of the 68 content areas assessed in 2022.

#### **MOCA-Peds** content areas

In 2022, MOCA-Peds—Pediatric Hematology-Oncology consisted of questions from a total of 68 content areas, broken down as follows:

- 45 learning objectives<sup>1</sup> Each diplomate initially received one question from each of the 45 specific content areas drawn from the pediatric hematology-oncology content outline.
- Four featured readings<sup>1</sup> Each diplomate also received two questions per featured reading (eg, clinical guidelines, journal articles) for a total of eight featured reading questions.

A pool of questions was developed for each learning objective and for each featured reading. Questions were then drawn from the pool and administered to diplomates throughout 2022 according to the specifications described in the bulleted list above.

## Understanding this report

This report provides a graphical summary of diplomate performance on each of the 68 content areas assessed in 2022. Within the graphic and in the example below, the point ( • ) reflects the average percent correct for all questions within that learning objective or featured reading. The bar (—) reflects the range of percent correct values for the questions within that learning objective or featured reading. More specifically, the bar's lower endpoint indicates the most difficult question (ie, answered correctly by the lowest percentage of diplomates) and the bar's upper endpoint indicates the easiest question (ie, answered correctly by the highest percentage of diplomates).



<sup>&</sup>lt;sup>1</sup>Each diplomate also received 15 "repeat" questions selected from their original subset of learning objective and featured reading questions. Performance on the repeat administrations is not included in this report.

#### A note of caution

Many factors (eg, specific content of the question, wording of the question, plausibility of the incorrect answers) can impact diplomate performance on any question. It is thus difficult to determine if poor performance on a single question, or small set of questions, within a given content area reflects a true gap in diplomate knowledge or if the question(s) associated with that content area were difficult for other reasons (or some combination of both). Collectively, the entire set of MOCA-Peds questions (across all content areas) constitutes a psychometrically valid assessment of the diplomate's overall level of knowledge. Performance within a given content area is based on fewer questions, however, and is therefore less useful for making inferences about diplomate knowledge in that specific content area.

It is important to note again that for security reasons, a pool of questions was developed for each content area so that each diplomate received a unique set of questions. In addition, the number of questions can vary from one content area to the next. In cases where a content area had a relatively large pool of questions, the number of diplomates who answered each question was reduced, which diminished the statistical precision of each question's percent correct value. In cases where a content area had a relatively small number of questions, each question was answered by a larger number of diplomates, but the overall breadth of the content being assessed within that content area was constrained, which limits the generalizability of the results.

In other words, MOCA-Peds was designed to assess individual diplomates with respect to their overall level of knowledge in pediatric hematology-oncology. It was not designed to provide the pediatric community with diagnostic feedback pertaining to specific content areas within pediatric hematology-oncology. The results within this report may be informative and useful for that secondary purpose, but they should be interpreted with a degree of caution.

### Additional notes

- To protect the security of the content of the assessment, the questions themselves, along with information about the number of questions in the pool for any particular learning objective or featured reading, are not provided in this report.
- This report contains data aggregated across many diplomates participating in the MOCA-Peds program and cannot be used to make inferences or draw conclusions regarding any particular diplomate.

# 2022 Content Area Feedback Report Pediatric Hematology-Oncology

	Learning Objective	0	Perce	ent Correct	100
1.	Identify appropriate treatment regimens for Wilms tumor based on stage and histology.	•		<b>—</b>	
2. 3.	Know how to screen for stroke risk in a patient with sickle cell disease.  Compare the differences in selection, engraftment, and risk for graft-versus-host disease among the				
0.	different stem-cell sources utilized for hematopoietic stem-cell transplant.			-	
4.	Evaluate and manage a patient with macrocytic anemia.			-	
5. 6.	Know the emicizumab mechanism of action and its impact on coagulation testing.  Recognize aplastic anemia as a symptom of paroxysmal nocturnal hemoglobinuria.				
7.	Evaluate and manage a patient with non-rhabdomyomatous soft tissue sarcoma.			<u> </u>	
8.	Identify the indications for allogeneic hematopoietic stem-cell transplant for myeloproliferative				
_	disorders (chronic myeloid leukemia, juvenile myelomonocytic leukemia, etc).				
9.	Recognize and manage autoimmune neutropenia.  Distinguish between different presentations of alpha–thalassemia syndromes.				_
	Recognize clinical features of post-transplant lymphoproliferative disorder.		:	<u> </u>	
12.	Evaluate and manage a patient with eosinophilia.			-	
	Evaluate and manage a patient with Ewing sarcoma.		:	-	
	Evaluate and manage a patient with teratoma.  Describe the criteria that define central nervous system involvement in acute lymphocytic leukemia and			•	_
10.	acute myeloid leukemia.				
	Interpret von Willebrand factor testing.			-	
	Recognize the risk factors for neuropathic pain and understand its management.			•	
18.	Manage the complications associated with tumor lysis syndrome.  Evaluate and manage a patient with central nervous system germ–cell tumor.				_
	Manage thrombopoietin mimetics in patients with immune thrombocytopenia.			-	
	American Society of Hematology 2020 guidelines for sickle cell disease: transfusion support (Featured				
00	Reading)				
	Understand the differences between the A– and other glucose–6–phosphate dehydrogenase (G6PD) variants.  Understand the role of ABO testing and compatibility in platelet transfusions.			-	
	Pediatric acute lymphoblastic leukemia, version 2_2020, NCCN clinical practice guidelines in oncology		•		
	(Featured Reading)			-	
	Diagnose and manage vitamin K deficiency.				
	ASH ISTH NHF WFH 2021 guidelines on the management of von Willebrand disease (Featured Reading)  Develop a treatment plan for a child with acquired aplastic anemia.			-	_
	Identify appropriate chemotherapy regimens for hepatoblastoma based on stage and histology.				
	Compare and contrast the principles and applications of different research study designs.				
30.	Understand the clinical presentation, laboratory findings, and treatment of transplant-associated			_	
31	thrombotic microangiopathy (TA–TMA) associated with hematopoietic stem–cell transplant.  Evaluate and treat iron deficiency anemia.			_	_
	Evaluate and diagnose a patient with an abdominal mass.		:	-	
33.	Evaluate and manage a child with medulloblastoma.			-	_
	Understand the role of blood product irradiation.			-•	<u> </u>
	Develop a treatment plan for a pediatric patient with chronic myeloid leukemia.  Understand the clinical and molecular features of prognostic importance in neuroblastoma.			_	<del>-</del>
	Understand the concept of number needed to treat when utilized to describe therapeutic interventions.		:		<del>-</del>
	Recognize the clinical presentation of autoimmune lymphoproliferative syndrome.				
39.	Understand the molecular etiology, surveillance recommendations, and epidemiology of leukemias				
40.	associated with Down syndrome. Understand the biology, epidemiology, staging, and prognostic factors for a patient with Langerhans cell				
40.	histiocytosis.			-	▶-
	Evaluate a child with pancytopenia.				<b>-</b>
	Evaluate a patient with splenomegaly.			4	•
43.	Recognize and diagnose neonatal alloimmune thrombocytopenia.  Understand the principles and management of acute and delayed therapy–induced vomiting.				
45.				: _	
46.				· -	•
	Diagnose and manage patients with macrothrombocytopenia.			-	•
	Manage a child with Diamond–Blackfan anemia.  Manage life–threatening hemorrhage in a patient on warfarin therapy.				•
	Evaluate a patient with microcytic anemia.			-	•
51.	Evaluate and manage a febrile non-hemolytic transfusion reaction.		;		-
	Identify significant clinical prognostic risk factors for acute lymphocytic leukemia.				•
	Recognize and manage acute chest syndrome in a patient with sickle cell disease.  Understand the role of chemotherapy, radiation therapy, and surgery in patients with non–Hodgkin			: :	-
54.	lymphoma.				•
55.	Únderstand the special considerations in conditioning regimen selection for patients with DNA repair		:	: :	
<b>50</b>	defects such as Fanconi anemia or dyskeratosis congenita.				
	Manage direct oral anticoagulant therapy for venous thrombosis.  Recognize the risk factors for and clinical and laboratory manifestations of chronic graft–versus–host				•
57.	According to the risk lactors for and clinical and laboratory manifestations of children grait-versus-riost disease.				•
58.	Compare different imaging modalities used to assess response to therapy in Hodgkin lymphoma.				•
	Understand the principles of pain assessment and treatment.				-
	Understand which components of the hemostatic system are measured by coagulation testing.				•
	Diagnose and manage a patient with cerebral venous sinus thrombosis.  Recognize indications for plasmapheresis.				-
	Understand the physical features, molecular etiology, surveillance recommendations, and associated				
	cancers in Beckwith-Wiedemann syndrome.				-
	Recognize and manage fungal infections in an immunocompromised host.				•
	Identify risk factors and preventative strategies for cardiotoxicity with antineoplastic therapy.  Rituximab for high–risk, mature B–cell non–Hodgkin's lymphoma in children (Featured Reading)			: :	
	Manage patients receiving alkylating agents, including mechanism of action, short–term toxicities, and				
	supportive care.			: :	
68.	Identify features specific to and treatment of acute promyelocytic leukemia.				•
Con	apple: Included in the comple were all diplomates who have answered at least one question in 2022 (N = 1,221)				