

Medical Knowledge Self-Assessment Program®

# Performance Interpretation Guidelines with Norm Tables

# **MKSAP® 13**

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## **MKSAP 13**

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- Computer scoring and reporting is being done by ACT, Iowa City, Iowa.

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### ***Continuing Education***

The American College of Physicians is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The American College of Physicians designates this educational activity, including all 10 books that constitute MKSAP 13, for a maximum of 140 category 1 credits toward the American Medical Association Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the educational activity.

### ***Learning Objectives***

The learning objectives of the Medical Knowledge Self-Assessment Program are to assess the current state of your knowledge in clinical medicine, compare your performance on the self-assessment tests with that of your peers, update your knowledge in key areas of internal medicine, apply new clinical problem solving skills to improve the health of your patients, and pursue further in-depth study using critically reviewed evidence-based references.

### ***Target Audience***

- General internists and primary care physicians
- Subspecialists who need to remain up to date in internal medicine
- Residents preparing for the certifying examination in internal medicine
- Physicians preparing for recertification in internal medicine

**Note**

The editors and publisher of Medical Knowledge Self-Assessment Program 13 recognize that the development of new material offers many opportunities for error. Despite our best efforts, some errors may persist in print. Drug dosage schedules are, we believe, accurate and in accordance with current standards. Readers are advised, however, to ensure that the recommended dosages in MKSAP 13 concur with the information provided in the product information material. This is especially important in cases of new, infrequently used, or highly toxic drugs.

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## SECTION I. HOW DO YOU COMPARE TO YOUR PEERS?

Welcome to the new Medical Knowledge Self-Assessment Program (MKSAP) *Performance Interpretation Guidelines with Norm Tables*, which are different from NORM TABLES provided for recent editions of MKSAP. The NORM TABLES provided here were based on the results of pre-publication test-takers who did not have access to the syllabus, test answers, and critiques. As you may know, previous NORM TABLES were based on the results of test-takers who had full access to this material. The goal of this new approach was to record test scores that more realistically reflected physicians' knowledge.

This supplement will help you interpret your scores on the multiple-choice questions from the 13<sup>th</sup> edition of MKSAP, and, in conjunction with your performance report, can help you plan an individualized program of continuing education. MKSAP 13 can also help you identify strengths or weaknesses in specific subspecialty areas of internal medicine, enhance your general knowledge, keep you abreast of new developments, and prepare you for future examinations.

MKSAP 13 was composed of three program components, referred to as Parts A, B, and C. The first two components, Parts A and B, included *Syllabi, Bibliographies, and Multiple-Choice Questions* for 10 internal medicine subspecialty books. Each part was composed of five subspecialty test sections. For each part, *Individual Performance Reports* are sent to participants who submit answer sheets to ACT, the American College of Physicians' (ACP) scoring vendor, for CME credit. *Individual Performance Reports* are cumulative, presenting the total percent correct score and number of CME credits earned for both previous and current scorings. The test question numbers of all questions answered incorrectly are listed with currently awarded scores. These reports can aid you in determining your particular strengths and weaknesses. Parts A and B also included the

*Answers, Critiques, Educational Objectives, and Bibliographies for Multiple-Choice Questions.* Part C is this supplement, *Performance Interpretation Guidelines with Norm Tables.*

If you have not received individual performance reports, you may score your own tests by using the answer keys provided in the MKSAP 13 books and Section V of this supplement and the Self-Scoring Instructions provided in Section VI.

To achieve the maximal educational benefit from Parts A and B of MKSAP 13, you should rely on the materials listed below:

1. *Syllabus and Multiple-Choice Questions*
2. *Answers, Critiques, and Bibliographies*
3. Your *Individual Performance Reports*, after submitting tests for CME credit
4. This supplement, *Performance Interpretation Guidelines with Norm Tables*

This supplement contains five additional sections.

SECTION II. PARTICIPANT GROUPS. This section describes participants who submitted their tests for the analysis of data and norm groups.

SECTION III. WHAT YOU NEED TO KNOW ABOUT YOUR SCORES. This section describes the steps taken to ensure the validity of the test questions and the scores. It also describes how the accuracy of the scores was evaluated and why this information is important.

SECTION IV. THE NORM TABLES. This section contains norm data for participants and instructions for using the norm tables.

SECTION V. ANSWER KEY, PERCENTAGE ANSWERING CORRECTLY, AND MEAN CLINICAL RELEVANCE RATING. This section contains an answer key for each subspecialty section and defines the percentage of participants answering each test question correctly. The section also contains mean clinical relevance ratings, which are based on the clinical relevance of each question on a scale of 1 (not relevant) to 5 (very relevant), as determined by participants in the Norm Tables.

SECTION VI. SELF-SCORING INSTRUCTIONS. This information will help you compute your percent correct score.

## **SECTION II. PARTICIPANT GROUPS**

Before you interpret the statistics provided in Section III and use the NORM TABLES, it is important to know which participants' scores were used to develop the data. Groups were defined on the basis of information provided by participants on their answer sheets. These pre-publication participants, recruited through special mailings and notices on the ACP Website, were asked to use their existing knowledge to answer questions, without accessing clinical reference material. Subspecialists were asked to submit tests that were not in their primary areas of expertise. However, it should be noted that ACP did not gain full compliance with this request.

## **SECTION III. WHAT YOU NEED TO KNOW ABOUT YOUR SCORES**

### **A. INTRODUCTION**

Participants in MKSAP 13 may note that their scores vary greatly from the NORM TABLES scores. There may be a variety of reasons for this discrepancy. One, of course, is that some participants are significantly more knowledgeable or less knowledgeable than other participants.

Other factors that could contribute to score variance:

- Participants who read the syllabus and soon thereafter answer the questions will do better on the test than someone who answers the questions without having read the syllabus.
- Those who read the test questions just before studying the syllabus may also score higher.
- Some participants take the test as a "closed book" exercise; others do not.
- Some participants seek consultation from content experts; others attend educational group meetings before taking the tests.
- Your own scores may be influenced by such factors.

## B. CONTENT VALIDITY

The validity of the scores relied on the expertise of distinguished clinicians and educators who selected the content presented in each syllabus. Syllabus content emphasized recent significant medical developments.

Test questions reflected primarily the material presented in each syllabus. After the questions were written, they passed through a series of editorial procedures designed to ascertain clarity, conciseness, and freedom from technical flaws. Even after the tests were administered, questions with unusual statistical performance were reviewed again by content experts. Questions determined to be flawed, too ambiguous, or too subspecialized were excluded from scoring. These questions were marked "excluded" in Section V and will not be counted toward CME credit. Test-takers were notified of any items involving incorrect information through errata memos in subsequent mailings.

### C. RELIABILITY (REL)

It is important that test scores provide reliable estimates of ability. The reliability (REL) coefficient was a measure of internal consistency that provided an estimate of the accuracy or stability of the scores. An examination was reliable to the extent that, if the ACP were to re-examine participants with a comparable form of the test, scores would be about the same on the second test as on the first. The reliability coefficient may range from 0.00 to 1.00.

When scores are used to provide educational feedback for the assessment of strengths and weaknesses, as they are for MKSAP 13, it is recommended that the reliability be .70 or higher. For MKSAP 13, all subspecialty sections had reliability coefficients at or above this criterion. Therefore the percent correct score provided a stable indicator of knowledge in the subspecialty. The table below shows the reliability for each subspecialty section.

<b>SUBSPECIALTY SECTION</b>	<b>REL</b>
Primary Care Medicine	.91
Cardiovascular Medicine	.80
Hematology and Oncology	.87
Infectious Disease Medicine	.74
Nephrology and Hypertension	.83
Endocrinology and Metabolism	.82
Gastroenterology and Hepatology	.87
Neurology	.70
Pulmonary Medicine and Critical Care	.82
Rheumatology	.74

#### D. STANDARD ERROR OF MEASUREMENT (SEM)

Ideally, the ACP would like to create tests that provide perfectly accurate measurements of participants' knowledge. In practice, however, scores are never completely free of error; they are *estimates* of what might be called "true ability." The standard error of measurement (SEM) is an index that indicates how much error there is in test scores.

Using the SEM, it is possible to define a score interval that indicates how far a test score is likely to stray from a participant's true ability. The interval is found by adding the SEM to a score and subtracting it from that score.

Observed scores are expected to fall within one SEM of the true ability of participants two times out of three, or approximately 67% of the time. For example, the SEM for Endocrinology and Metabolism scores was 3.99 percentage points. A participant whose true ability was 70 would usually receive a score between 66 and 74 ( $70 - 4$  and  $70 + 4$ ) in this subspecialty section. The table below shows the SEM for each subspecialty section.

<b>SUBSPECIALTY SECTION</b>	<b>SEM</b>
Primary Care Medicine	4.48
Cardiovascular Medicine	4.55
Hematology and Oncology	4.66
Infectious Disease Medicine	3.98
Nephrology and Hypertension	4.08
Endocrinology and Metabolism	3.99
Gastroenterology and Hepatology	4.19
Neurology	3.71
Pulmonary Medicine and Critical Care	4.17
Rheumatology	3.77

## SECTION IV. NORM TABLES

The NORM TABLES are useful for determining your standing relative to that of participants who completed tests before the program was published.

Norm data are provided for each group of participants. The first column contains PERCENT CORRECT SCORES. The remaining columns contain PERCENTILE RANKS. The percentile rank indicates the percentage of the group that scores lower than the corresponding percent correct score.

To use the NORM TABLES, first choose a percent correct score from either your *Individual Performance Report* or your own hand score computations. Then select the table for the norm group with which you would like to compare yourself. In the first column, locate your PERCENT CORRECT SCORE. Then read across the table to find your PERCENTILE RANK.

For example, suppose that your score was 90% correct in Endocrinology and Metabolism. At the percent correct score of 90 on the NORM TABLE, read across the page to find your percentile rank of 97.8. Your percentile rank means that 97.8 of the group scored lower than you in Endocrinology and Metabolism.

For each norm table, the *N* under the subspecialty section indicates the number of participants who completed tests for that subspecialty before the program was published. Please note that separate norm data were not compiled for subspecialists and generalists, as has been done in the past, because there were too few participants in these subgroups to produce meaningful data.

**NORM TABLES FOR MKSAP 13**

Percent Correct Score	Primary Care Medicine (N= 115 )	Cardiovascular Medicine (N= 113)	Hematology and Oncology (N=105)	Infectious Disease Medicine (N=121)	Nephrology and Hypertension (N=110)
93-94					99.1
91-92					
89-90					
87-88					98.2
85-86	98.3		98.1	99.2	96.4
83-84	97.4			98.3	93.6
81-82		99.1			91.8
79-80		96.5		95.9	88.2
77-78		95.6	95.2	94.2	83.6
75-76		92.0	92.4		81.8
73-74	95.7	89.4	89.5	92.6	74.5
71-72	93.0	86.7		90.1	69.1
69-70	88.7	79.6	84.8	81.0	60.0
67-68	86.1	74.3	80.0	72.7	55.5
65-66	84.3	65.5	75.2	68.6	50.9
63-64	80.0	52.2	70.5	63.6	41.8
61-62	76.5	40.7	62.9	57.0	39.1
59-60	67.8	34.5	53.3	47.1	31.8
57-58	62.6	25.7	47.6	38.0	27.3
55-56	55.7	20.4	37.1	33.1	21.8
53-54	50.4	18.6	32.4	23.1	20.9
51-52	46.1	15.9	28.6	19.0	14.5
49-50	40.9	10.6	23.8	15.7	11.8
47-48	35.7	7.1	21.0	9.9	8.2
45-46	32.2	4.4	15.2	8.3	6.4
43-44	25.2	2.7	13.3	6.6	2.7
41-42	21.7		10.5	5.8	
39-40	20.0		8.6	4.1	1.8
37-38	15.7		5.7	0.8	
35-36	14.8		4.8		0.9
33-34	13.9				
31-32	13.0				
29-30	11.3		3.8		
27-28			2.9		
25-26	10.4	1.8	1.9		
23-24	9.6	0.9			
Below 23	7.0				

<b>NORM TABLES (continued)</b>					
Percent Correct Score	Endocrinology and Metabolism (N=92)	Gastroenterology and Hepatology (N=104)	Neurology (N=108)	Pulmonary Medicine and Critical Care (N=94)	Rheumatology (N=114)
93-94		99.0			
91-92					
89-90	97.8	98.1			
87-88		97.1		98.9	
85-86		96.2			99.1
83-84	96.7	93.3			
81-82		90.4	98.1		
79-80		88.5		96.8	
77-78	94.6	85.6		94.7	
75-76	93.5	80.8	94.4	91.5	95.6
73-74		73.1	91.7	85.1	93.9
71-72	90.2	70.2	87.0	80.9	91.2
69-70	84.8	59.6	84.3	72.3	90.4
67-68	79.3	51.9	78.7	64.9	87.7
65-66	72.8	44.2	71.3	57.4	82.5
63-64	66.3	38.5	61.1	48.9	80.7
61-62	58.7	31.7	52.8	46.8	73.7
59-60	54.3	27.9	48.1	33.0	63.2
57-58	48.9	21.2	38.9	28.7	56.1
55-56	40.2	17.3	36.1	22.3	50.0
53-54	29.3	13.5	27.8	13.8	42.1
51-52	21.7	10.6	20.4	8.5	35.1
49-50	17.4	5.8	16.7		24.6
47-48	14.1	4.8	12.0	7.4	21.9
45-46			11.1	6.4	17.5
43-44	13.0	3.8	3.7		15.8
41-42	6.5			3.2	14.0
39-40	5.4		2.8		13.2
37-38					17.9
35-36	4.3	2.9	0.9		6.1
33-34	3.3				4.4
31-32		1.9			2.6
29-30	2.2				1.8
27-28	1.1			2.1	
25-26					0.9
23-24				1.1	
Below 23					

**SECTION V. ANSWER KEY, PERCENTAGE ANSWERING CORRECTLY, AND MEAN CLINICAL RELEVANCE RATING**

This section contains an answer key for each subspecialty section and the percentage of participants who answered each test question correctly. The mean clinical relevance rating is also provided, based on the clinical relevance of each question on a scale of 1 (not relevant) to 5 (very relevant). The participants for each subspecialty test are broken down by specialty and subspecialty to help you put these scores in perspective. As noted previously, subspecialists were asked to not take tests in their primary areas of expertise to ensure a more realistic measurement of the general knowledge of all participants. However, ACP did not gain full compliance with this request, as reflected in the composition of the Cardiovascular; Hematology and Oncology; Endocrinology and Metabolism; Gastroenterology and Hepatology; and Neurology test groups.

<b>PRIMARY CARE MEDICINE</b>							
<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
1	A	43	4.64	62	E	70	4.10
2	D	63	4.24	63	E	57	4.11
3	D	73	3.88	64	E	71	4.26
4	B	37	4.30	65	B	65	4.12
5	EXCLUDED	—	—	66	E	48	3.70
6	A	42	3.92	67	C	57	4.18
7	B	22	4.10	68	D	42	3.98
8	EXCLUDED	—	—	69	B	43	4.26
9	D	55	4.06	70	D	50	4.08
10	E	69	4.47	71	B	64	4.09
11	D	50	3.96	72	D	27	3.91
12	D	55	3.68	73	E	32	4.08
13	C	63	4.23	74	B	59	4.25
14	D	55	4.26	75	C	84	4.32
15	EXCLUDED	—	—	76	EXCLUDED	—	—
16	B	76	3.73	77	D	37	4.09
17	B	45	4.09	78	E	30	3.78
18	A	25	3.88	79	D	38	4.13
19	D	32	4.10	80	C	53	3.93
20	E	62	4.04	81	A	57	4.03
21	EXCLUDED	—	—	82	E	63	4.26
22	B	61	3.65	83	C	53	4.24
23	B	63	3.96	84	B	89	4.11
24	E	38	3.81	85	D	47	3.93
25	C	72	4.05	86	C	75	3.94

**PRIMARY CARE MEDICINE (continued)**

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
26	D	42	3.65	87	B	41	4.20
27	D	25	4.00	88	D	68	4.19
28	EXCLUDED	—	—	89	A	31	4.15
29	B	57	4.24	90	C	26	3.92
30	C	41	4.27	91	D	40	4.28
31	EXCLUDED	—	—	92	B	74	4.38
32	A	74	3.95	93	D	43	4.16
33	B	52	4.24	94	EXCLUDED	—	—
34	D	22	3.63	95	E	32	4.14
35	E	51	4.11	96	C	39	3.79
36	B	59	4.19	97	EXCLUDED	—	—
37	D	33	4.12	98	A	65	4.15
38	EXCLUDED	—	—	99	B	62	4.09
39	B	79	2.94	100	C	22	4.20
40	D	52	4.00	101	EXCLUDED	—	—
41	C	38	3.80	102	B	10	4.26
42	D	43	3.90	103	C	80	4.27
43	E	43	4.19	104	B	17	3.92
44	A	77	4.34	105	B	45	3.91
45	E	83	3.95	106	E	17	4.23
46	A	65	3.96	107	D	63	4.08
47	A	35	4.10	108	E	30	4.04
48	D	43	3.61	109	E	49	3.97
49	EXCLUDED	—	—	110	EXCLUDED	—	—
50	EXCLUDED	—	—	111	E	32	4.13
51	C	57	4.14	112	B	75	3.78
52	A	45	4.17	113	EXCLUDED	—	—
53	E	37	3.87	114	EXCLUDED	—	—
54	D	39	3.79	115	D	55	4.14
55	EXCLUDED	—	—	116	C	65	4.06
56	C	63	4.04	117	EXCLUDED	—	—
57	A	59	4.27	118	D	23	4.05
58	E	69	4.21	119	B	21	4.40
59	A	51	4.25	120	B	20	4.11
60	EXCLUDED	—	—	121	C	53	4.42
61	A	49	4.11				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
80	0	2	1	0	2
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
1	1	1	6	0	3
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
1	2	5	1	7	

**CARDIOVASCULAR MEDICINE**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
1	A	24	4.08	60	A	51	3.96
2	D	72	4.50	61	E	49	4.12
3	D	26	4.15	62	E	45	3.96
4	C	78	4.15	63	B	23	3.72
5	EXCLUDED	—	—	64	E	64	4.17
6	C	69	4.09	65	C	74	3.98
7	D	44	3.77	66	EXCLUDED	—	—
8	D	83	4.26	67	E	58	4.24
9	E	53	3.40	68	D	24	3.57
10	C	71	4.07	69	B	49	4.29
11	C	75	3.75	70	A	49	3.76
12	D	41	3.38	71	D	92	4.27
13	B	87	4.17	72	EXCLUDED	—	—
14	A	81	4.26	73	A	58	3.97
15	D	30	3.80	74	D	80	3.89
16	B	51	4.00	75	A	58	3.99
17	B	73	4.23	76	C	77	3.89
18	D	64	3.67	77	B	77	3.94
19	E	94	4.41	78	E	44	4.11
20	C	75	3.50	79	D	46	4.23
21	A	69	3.99	80	C	59	3.69
22	EXCLUDED	—	—	81	A	76	4.02
23	A	59	4.01	82	C	67	4.16
24	D	73	4.22	83	A	36	3.56
25	B	73	4.00	84	D	37	4.33
26	D	72	4.06	85	A	66	3.89
27	C	69	4.31	86	D	67	4.19
28	B	40	4.07	87	EXCLUDED	—	—
29	E	65	4.39	88	E	80	4.26
30	B	58	3.82	89	B	62	3.98
31	D	68	4.16	90	E	35	4.12
32	D	88	4.40	91	B	54	3.68
33	D	79	3.73	92	A	69	4.26
34	B	37	3.61	93	A	73	4.10
35	C	65	3.67	94	D	68	4.25
36	A	76	4.15	95	A	71	4.40
37	EXCLUDED	—	—	96	B	35	4.13
38	D	83	3.69	97	A	36	4.23
39	E	82	4.22	98	A	79	3.52
40	E	91	4.23	99	C	57	4.23
41	D	83	4.08	100	A	13	4.11
42	D	75	3.94	101	B	53	3.86
43	B	67	4.00	102	A	43	3.87

**CARDIOVASCULAR MEDICINE (continued)**

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
44	C	53	4.14	103	C	71	3.97
45	D	94	4.45	104	D	35	3.86
46	E	77	4.31	105	B	73	4.04
47	B	68	3.60	106	C	58	3.79
48	E	89	4.28	107	A	77	4.20
49	C	81	4.05	108	B	78	4.30
50	A	79	4.11	109	C	62	4.17
51	E	82	3.91	110	EXCLUDED	—	—
52	A	39	4.15	111	EXCLUDED	—	—
53	D	79	4.05	112	B	45	4.24
54	A	65	4.20	113	C	46	3.79
55	EXCLUDED	—	—	114	B	33	3.83
56	D	49	3.93	115	C	34	3.44
57	C	35	3.97	116	EXCLUDED	—	—
58	C	59	3.73	117	A	27	3.60
59	D	6	3.61				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
60	1	5	0	0	1
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
3	3	2	11	6	4
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
2	1	2	3	8	

## HEMATOLOGY AND ONCOLOGY

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
1	D	73	4.13	58	E	48	3.50
2	E	65	4.16	59	B	84	3.71
3	B	77	3.81	60	E	78	3.63
4	B	55	3.87	61	B	59	3.80
5	A	23	4.04	62	EXCLUDED	—	—
6	D	53	4.18	63	D	48	3.28
7	E	42	3.58	64	B	76	3.60
8	D	51	3.97	65	C	54	3.86
9	D	61	3.84	66	A	64	3.99
10	C	44	3.59	67	D	65	3.98
11	E	27	4.28	68	D	36	4.01
12	D	42	3.78	69	A	49	4.27
13	D	16	3.98	70	A	57	3.89
14	B	40	3.67	71	A	75	4.15
15	B	82	3.34	72	A	40	4.06
16	C	65	4.00	73	B	69	4.05
17	C	81	3.70	74	C	62	3.62
18	D	74	4.18	75	B	65	3.80
19	B	47	4.06	76	C	90	3.99
20	B	60	3.75	77	D	54	4.05
21	A	73	3.72	78	E	64	4.11
22	E	50	4.19	79	E	42	3.95
23	A	62	3.43	80	A	60	3.76
24	D	37	3.67	81	B	65	3.90
25	B	55	3.46	82	C	65	3.21
26	D	65	4.18	83	D	73	3.77
27	A	53	3.60	84	C	50	3.87
28	E	69	3.92	85	E	75	3.80
29	E	57	3.98	86	C	55	3.87
30	B	86	3.96	87	D	49	4.17
31	C	82	3.63	88	D	75	3.78
32	EXCLUDED	—	—	89	B	36	3.89
33	E	37	3.78	90	A	86	4.00
34	A	52	4.25	91	B	89	4.22
35	C	32	3.64	92	A	23	3.59
36	B	54	3.76	93	D	24	3.69
37	D	75	4.20	94	C	68	3.67
38	B	65	3.96	95	E	57	3.51
39	C	62	3.76	96	A	40	3.33
40	D	29	4.08	97	B	61	3.92
41	C	38	4.05	98	B	35	3.44
42	A	62	3.72	99	D	50	3.76
43	C	77	3.58	100	E	41	4.19

## HEMATOLOGY AND ONCOLOGY (continued)

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
44	EXCLUDED	—	—	101	A	94	4.21
45	E	76	3.98	102	C	22	3.66
46	C	71	4.40	103	D	37	3.65
47	B	47	3.73	104	C	68	3.70
48	B	36	4.27	105	A	49	3.93
49	EXCLUDED	—	—	106	B	72	3.83
50	C	68	3.58	107	D	30	3.58
51	C	49	4.01	108	C	37	4.28
52	C	59	3.89	109	C	36	3.29
53	A	14	3.78	110	B	31	4.12
54	EXCLUDED	—	—	111	B	89	3.48
55	B	73	4.16	112	D	66	4.06
56	E	34	3.60	113	C	65	3.77
57	B	63	3.68				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
61	0	4	3	0	4
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
3	0	1	8	5	4
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
0	4	2	3	3	

**INFECTIOUS DISEASE MEDICINE**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
1	C	78	4.48	50	E	32	3.30
2	D	80	3.84	51	D	44	3.79
3	D	64	3.82	52	C	35	4.26
4	B	56	4.08	53	B	77	3.97
5	EXCLUDED	—	—	54	E	34	3.96
6	C	68	3.50	55	A	41	3.61
7	D	48	3.93	56	B	65	3.86
8	EXCLUDED	—	—	57	A	61	4.26
9	C	24	3.96	58	EXCLUDED	—	—
10	C	59	3.57	59	EXCLUDED	—	—
11	E	25	3.29	60	EXCLUDED	—	—
12	C	74	3.77	61	A	69	3.71
13	B	47	4.03	62	A	94	4.27
14	A	47	3.69	63	E	63	3.81
15	A	59	3.83	64	A	76	4.30
16	E	79	4.35	65	EXCLUDED	—	—
17	C	35	4.41	66	EXCLUDED	—	—
18	D	75	3.87	67	E	78	4.10
19	D	69	4.34	68	EXCLUDED	—	—
20	C	99	4.38	69	E	32	3.54
21	E	50	3.81	70	A	29	4.01
22	EXCLUDED	—	—	71	A	91	4.41
23	B	76	3.97	72	E	77	4.54
24	A	81	4.18	73	D	59	3.74
25	EXCLUDED	—	—	74	E	31	3.65
26	EXCLUDED	—	—	75	A	60	3.86
27	B	46	3.74	76	EXCLUDED	—	—
28	D	54	3.46	77	B	90	4.04
29	C	36	4.54	78	D	46	4.06
30	B	47	3.94	79	B	38	3.54
31	A	60	4.10	80	B	78	3.85
32	EXCLUDED	—	—	81	E	27	3.71
33	C	70	4.13	82	C	73	3.47
34	D	36	4.19	83	B	64	4.26
35	C	49	3.96	84	B	64	3.83
36	EXCLUDED	—	—	85	D	21	3.80
37	E	43	4.17	86	A	79	4.06
38	B	51	3.18	87	EXCLUDED	—	—
39	A	40	3.18	88	A	74	3.96
40	A	86	4.06	89	B	45	4.02
41	C	69	3.59	90	D	73	3.94
42	B	60	3.59	91	D	70	3.85
43	C	47	3.82	92	C	92	3.98

**INFECTIOUS DISEASE MEDICINE (continued)**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
44	C	21	3.76	93	EXCLUDED	—	—
45	B	64	3.53	94	C	77	4.33
46	D	79	3.84	95	A	95	4.25
47	D	77	3.88	96	D	21	4.11
48	D	57	4.19	97	D	62	3.78
49	A	67	4.40				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
63	0	9	5	0	2
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
3	3	0	10	0	8
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
0	4	3	3	5	

## NEPHROLOGY AND HYPERTENSION

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
1	B	28	4.61	49	B	70	4.46
2	C	50	4.36	50	EXCLUDED	—	—
3	B	75	3.65	51	A	65	3.62
4	E	32	4.19	52	D	58	3.66
5	D	57	4.09	53	C	91	4.17
6	A	85	4.40	54	EXCLUDED	—	—
7	A	95	4.15	55	B	73	3.54
8	B	76	4.28	56	A	60	4.17
9	B	82	4.06	57	B	75	4.09
10	E	50	3.47	58	C	71	3.78
11	B	90	4.18	59	B	45	3.90
12	D	73	3.95	60	A	67	3.94
13	E	37	3.68	61	B	78	3.45
14	B	54	3.83	62	A	65	3.43
15	EXCLUDED	—	—	63	EXCLUDED	—	—
16	A	67	4.23	64	EXCLUDED	—	—
17	C	83	4.58	65	B	70	3.95
18	D	84	4.51	66	E	51	3.35
19	C	46	3.89	67	C	75	4.02
20	B	60	3.94	68	A	73	4.03
21	EXCLUDED	—	—	69	A	55	4.16
22	C	82	3.76	70	D	64	4.09
23	A	60	3.90	71	B	57	3.80
24	D	58	4.50	72	C	83	3.80
25	EXCLUDED	—	—	73	C	69	3.71
26	C	57	3.56	74	B	60	3.42
27	B	71	3.61	75	C	61	3.62
28	D	55	4.11	76	D	48	3.91
29	C	52	4.14	77	B	42	3.90
30	A	84	4.24	78	EXCLUDED	—	—
31	E	54	4.06	79	C	88	4.14
32	A	90	3.89	80	C	36	4.21
33	D	85	3.83	81	B	52	3.65
34	C	62	4.12	82	C	85	3.90
35	B	77	4.13	83	B	94	3.99
36	B	59	4.00	84	D	64	4.33
37	EXCLUDED	—	—	85	A	86	3.94
38	A	69	3.88	86	D	85	4.05
39	B	64	3.95	87	A	44	3.90
40	B	72	3.94	88	C	50	3.46
41	C	73	4.32	89	A	35	3.62
42	A	65	4.12	90	A	44	3.54
43	D	58	4.46	91	C	62	4.07

**NEPHROLOGY AND HYPERTENSION (continued)**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
44	E	38	4.10	92	E	74	3.99
45	C	30	4.17	93	D	63	3.81
46	A	50	3.86	94	D	34	3.92
47	A	50	3.83	95	E	87	4.12
48	D	58	4.01				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
66	0	5	1	0	3
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
5	4	3	7	2	0
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
1	0	4	1	7	

**ENDOCRINOLOGY AND METABOLISM**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
1	D	88	4.42	47	D	17	4.13
2	B	64	3.79	48	C	72	3.73
3	C	55	4.06	49	EXCLUDED	—	—
4	C	73	3.49	50	E	27	3.59
5	C	99	4.51	51	B	34	3.15
6	D	43	3.94	52	D	40	3.51
7	D	42	3.48	53	B	84	3.53
8	E	51	3.93	54	C	82	3.76
9	D	76	4.07	55	D	54	4.22
10	C	89	3.28	56	D	75	3.75
11	A	72	3.76	57	A	15	4.26
12	EXCLUDED	—	—	58	A	25	3.37
13	C	42	3.99	59	E	38	4.17
14	D	48	3.91	60	E	14	3.28
15	C	88	4.13	61	A	33	3.46
16	A	87	3.64	62	A	66	4.17
17	B	64	4.12	63	B	47	3.69
18	C	63	4.11	64	B	48	4.15
19	A	79	3.66	65	B	75	3.86
20	C	40	3.70	66	C	85	4.29
21	D	14	3.49	67	D	9	4.36
22	E	96	4.14	68	D	52	4.20
23	C	80	3.34	69	B	75	3.99
24	D	26	2.80	70	D	40	3.98
25	D	70	3.57	71	C	45	4.24
26	A	26	3.56	72	C	58	3.53
27	B	60	3.85	73	A	63	4.03
28	E	87	4.31	74	A	75	4.27
29	C	18	3.70	75	A	64	3.76
30	A	61	3.54	76	C	82	4.26
31	A	33	3.98	77	E	55	3.67
32	EXCLUDED	—	—	78	B	39	4.18
33	D	91	3.83	79	E	89	3.89
34	D	64	3.61	80	C	33	4.16
35	C	26	3.13	81	B	58	3.86
36	D	39	3.36	82	A	24	3.73
37	B	46	3.78	83	D	63	3.81
38	A	92	4.30	84	EXCLUDED	—	—
39	EXCLUDED	—	—	85	E	87	4.31
40	B	53	3.92	86	C	62	3.66
41	C	95	3.84	87	B	73	3.63
42	D	66	4.19	88	C	80	4.06
43	B	50	3.75	89	E	86	4.06
44	D	67	4.05	90	D	39	3.55

**ENDOCRINOLOGY AND METABOLISM (continued)**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
45	D	70	3.76	91	A	30	3.56
46	A	50	3.48	92	B	52	3.61
				93	A	24	3.78

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
53	0	7	1	0	1
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
6	0	2	7	3	1
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
0	2	1	0	8	

## GASTROENTEROLOGY AND HEPATOLOGY

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
1	A	26	3.42	55	B	74	3.97
2	D	92	4.11	56	C	43	3.56
3	E	89	4.42	57	A	87	4.13
4	A	44	3.85	58	D	75	4.04
5	A	81	3.72	59	C	87	3.56
6	A	75	4.35	60	D	36	3.52
7	A	65	3.80	61	B	41	3.70
8	C	55	3.99	62	B	63	3.72
9	B	71	3.51	63	B	37	3.46
10	C	62	3.41	64	EXCLUDED	—	—
11	D	85	3.69	65	D	49	4.08
12	C	15	4.07	66	C	33	3.34
13	C	70	3.78	67	B	45	4.22
14	B	49	3.05	68	C	91	4.15
15	A	76	3.23	69	B	56	3.54
16	E	73	4.19	70	A	38	3.52
17	B	60	4.11	71	C	64	3.55
18	C	55	4.17	72	A	40	3.92
19	B	35	2.63	73	A	91	3.65
20	B	81	4.11	74	D	73	3.53
21	EXCLUDED	—	—	75	C	88	4.02
22	B	72	3.35	76	D	90	4.30
23	A	58	4.16	77	B	81	3.54
24	D	74	4.32	78	D	92	4.08
25	D	55	3.55	79	C	72	4.08
26	D	81	4.03	80	A	31	3.58
27	B	75	4.11	81	E	90	4.04
28	A	96	4.07	82	E	89	4.20
29	E	91	3.82	83	C	55	3.72
30	EXCLUDED	—	—	84	B	29	3.28
31	EXCLUDED	—	—	85	A	58	3.78
32	A	90	3.65	86	B	37	4.19
33	A	70	3.64	87	C	88	3.97
34	B	52	4.18	88	B	63	4.09
35	B	44	4.00	89	B	39	3.57
36	C	42	3.76	90	EXCLUDED	—	—
37	B	88	3.85	91	B	48	3.39
38	C	23	3.60	92	C	75	3.34
39	D	50	3.85	93	C	72	3.90
40	B	95	3.96	94	E	62	4.10
41	E	72	3.94	95	A	91	4.08
42	B	43	3.64	96	E	51	3.37
43	E	76	3.68	97	C	34	3.63

**GASTROENTEROLOGY AND HEPATOLOGY (continued)**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
44	D	95	4.43	98	A	63	3.93
45	A	75	4.22	99	B	82	4.09
46	B	79	3.89	100	D	61	3.74
47	EXCLUDED	—	—	101	C	72	3.82
48	D	54	3.67	102	EXCLUDED	—	—
49	D	80	3.90	103	D	73	3.17
50	A	66	4.15	104	C	84	4.02
51	D	86	3.79	105	C	65	3.77
52	A	91	3.85	106	A	61	4.04
53	E	24	3.96	107	D	64	3.71
54	C	64	3.42	108	E	66	3.98

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
64	0	6	2	0	3
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
1	1	3	2	3	1
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
0	2	3	2	11	

## NEUROLOGY

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
1	B	53	4.11	39	A	59	4.13
2	E	29	4.46	40	D	63	3.84
3	EXCLUDED	—	—	41	A	88	3.86
4	B	56	3.77	42	D	67	3.51
5	B	69	4.26	43	D	77	4.30
6	D	75	3.79	44	D	81	4.00
7	C	44	3.78	45	D	74	4.00
8	D	81	4.21	46	A	83	3.95
9	A	90	4.26	47	D	32	3.85
10	B	77	4.05	48	C	19	4.16
11	E	68	4.40	49	A	23	4.25
12	C	85	3.88	50	E	80	4.28
13	A	9	3.63	51	B	86	3.52
14	D	54	4.28	52	A	42	4.13
15	A	80	4.00	53	B	62	3.72
16	A	60	3.86	54	EXCLUDED	—	—
17	C	92	4.13	55	B	42	3.62
18	B	76	3.68	56	D	41	3.81
19	C	10	4.11	57	B	44	3.86
20	B	83	4.17	58	A	55	3.71
21	A	67	4.23	59	C	28	3.51
22	D	63	3.59	60	C	61	3.75
23	C	73	4.17	61	B	78	4.24
24	C	23	3.62	62	D	68	4.03
25	A	63	4.14	63	B	56	3.93
26	A	37	4.22	64	C	94	3.69
27	E	17	3.68	65	B	65	3.73
28	C	54	3.87	66	A	70	3.90
29	D	45	4.05	67	B	58	3.72
30	B	73	4.08	68	EXCLUDED	—	—
31	D	56	3.75	69	A	63	4.34
32	D	81	3.87	70	B	78	3.48
33	E	31	3.77	71	A	35	3.84
34	E	16	3.43	72	D	31	3.77
35	A	69	4.47	73	D	75	3.85
36	B	74	4.02	74	B	40	3.87
37	C	60	3.77	75	A	47	4.15
38	B	56	4.20				

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u> 63	<u>Allergy / Immunology</u> 0	<u>Cardiovascular</u> 9	<u>Critical Care</u> 0	<u>Dermatology</u> 0	<u>Endocrinology / Metabolism</u> 1
<u>Gastroenterology</u> 5	<u>Geriatrics</u> 2	<u>Hematology</u> 1	<u>Hospital-based Medicine</u> 5	<u>Infectious Disease Medicine</u> 2	<u>Nephrology</u> 4
<u>Neurology</u> 1	<u>Oncology</u> 1	<u>Pulmonary Medicine</u> 3	<u>Rheumatology</u> 2	<u>Unknown</u> 9	

**PULMONARY MEDICINE AND CRITICAL CARE**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
1	B	98	4.05	53	C	40	3.70
2	C	72	4.03	54	C	94	4.19
3	D	62	3.56	55	D	49	3.97
4	B	91	3.89	56	C	41	4.21
5	C	57	3.92	57	B	43	3.63
6	D	82	4.35	58	C	37	3.21
7	A	45	4.38	59	B	53	3.81
8	D	28	3.98	60	A	88	3.89
9	D	73	3.78	61	C	51	4.11
10	C	71	4.38	62	A	60	3.38
11	C	86	3.58	63	B	17	4.06
12	A	46	3.70	64	B	98	4.07
13	D	40	3.89	65	A	26	3.84
14	D	20	3.24	66	B	33	3.57
15	C	82	3.96	67	C	61	3.96
16	EXCLUDED	—	—	68	D	53	4.09
17	D	51	3.84	69	B	30	3.62
18	D	90	4.20	70	C	22	3.53
19	A	37	3.85	71	C	45	4.04
20	EXCLUDED	—	—	72	B	21	3.66
21	D	83	4.19	73	EXCLUDED	—	—
22	D	96	4.48	74	C	36	3.28
23	A	87	3.82	75	D	93	4.03
24	EXCLUDED	—	—	76	C	66	3.40
25	B	56	4.14	77	B	60	3.98
26	D	72	4.27	78	E	91	4.10
27	B	43	4.04	79	D	59	3.97
28	A	87	3.85	80	A	66	4.14
29	D	79	3.75	81	C	89	4.37
30	D	77	3.57	82	A	76	4.09
31	D	89	3.82	83	C	70	3.79
32	D	49	4.23	84	B	85	3.45
33	EXCLUDED	—	—	85	C	56	3.27
34	B	51	3.66	86	D	87	4.23
35	B	66	3.67	87	D	44	3.72
36	EXCLUDED	—	—	88	D	51	3.76
37	D	93	4.21	89	B	22	3.57
38	B	61	3.92	90	EXCLUDED	—	—
39	A	71	3.49	91	C	50	3.35
40	B	26	3.87	92	C	84	3.84
41	B	34	3.84	93	D	73	3.60
42	C	86	4.03	94	E	69	3.88
43	D	56	4.09	95	D	45	4.02

**PULMONARY MEDICINE AND CRITICAL CARE (continued)**

<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>	<u>QUESTION NUMBER</u>	<u>ANSWER KEY</u>	<u>PERCENT CORRECT</u>	<u>MEAN CLINICAL RELEVANCE RATING</u>
44	A	84	4.00	96	C	83	3.33
45	B	19	3.79	97	A	24	3.80
46	D	72	4.08	98	D	82	3.91
47	C	67	3.90	99	D	46	3.82
48	D	74	4.04	100	B	76	3.90
49	C	63	3.83	101	C	93	4.00
50	D	62	3.89	102	D	61	3.64
51	C	60	4.26	103	C	68	3.52
52	D	47	3.56	104	A	47	3.56

Participants who completed this test before publication include the following:

<u>General Internal Medicine</u>	<u>Allergy / Immunology</u>	<u>Cardiovascular</u>	<u>Critical Care</u>	<u>Dermatology</u>	<u>Endocrinology / Metabolism</u>
51	0	6	1	0	2
<u>Gastroenterology</u>	<u>Geriatrics</u>	<u>Hematology</u>	<u>Hospital-based Medicine</u>	<u>Infectious Disease Medicine</u>	<u>Nephrology</u>
1	4	0	8	5	4
<u>Neurology</u>	<u>Oncology</u>	<u>Pulmonary Medicine</u>	<u>Rheumatology</u>	<u>Unknown</u>	
2	1	0	1	6	

## RHEUMATOLOGY

QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING	QUESTION NUMBER	ANSWER KEY	PERCENT CORRECT	MEAN CLINICAL RELEVANCE RATING
1	C	78	4.10	39	EXCLUDED	—	—
2	EXCLUDED	—	—	40	D	50	3.64
3	EXCLUDED	—	—	41	A	55	3.83
4	A	25	3.77	42	C	30	3.99
5	C	39	3.83	43	D	48	3.73
6	C	93	4.32	44	B	54	3.93
7	E	32	4.32	45	EXCLUDED	—	—
8	D	48	4.03	46	E	61	3.66
9	C	48	3.65	47	C	51	4.04
10	C	45	3.18	48	A	73	4.15
11	D	46	3.68	49	D	37	4.09
12	E	81	4.41	50	A	91	3.91
13	C	39	3.75	51	B	59	3.71
14	E	51	4.07	52	C	52	3.88
15	D	62	3.66	53	C	46	3.86
16	C	50	3.46	54	EXCLUDED	—	—
17	C	82	3.92	55	E	34	3.94
18	EXCLUDED	—	—	56	A	81	3.60
19	B	32	3.74	57	C	35	4.10
20	D	50	3.39	58	D	85	3.96
21	C	49	4.21	59	B	25	3.63
22	A	91	4.04	60	C	42	3.48
23	A	67	4.07	61	C	63	3.54
24	D	62	3.75	62	C	56	3.93
25	D	40	3.26	63	B	29	2.85
26	D	77	4.12	64	C	31	3.63
27	A	87	3.59	65	C	38	3.79
28	C	48	3.99	66	B	44	3.73
29	B	46	3.90	67	C	36	3.63
30	A	58	4.15	68	C	61	4.05
31	A	62	3.58	69	C	49	3.54
32	EXCLUDED	—	—	70	B	47	3.68
33	D	38	3.59	71	C	63	3.53
34	D	66	3.53	72	C	62	3.66
35	C	47	3.49	73	A	66	3.75
36	B	49	3.89	74	C	82	3.74
37	C	23	3.84	75	EXCLUDED	—	—
38	B	53	3.77	76	C	79	3.74
				77	EXCLUDED	—	—

Participants who completed this test before publication include the following:

General Internal <u>Medicine</u> 66	Allergy / <u>Immunology</u> 0	<u>Cardiovascular</u> 5	<u>Critical Care</u> 0	<u>Dermatology</u> 0	Endocrinology / <u>Metabolism</u> 4
<u>Gastroenterology</u> 3	<u>Geriatrics</u> 1	<u>Hematology</u> 4	Hospital-based <u>Medicine</u> 14	Infectious Disease <u>Medicine</u> 0	<u>Nephrology</u> 5
<u>Neurology</u> 1	<u>Oncology</u> 1	Pulmonary <u>Medicine</u> 2	<u>Rheumatology</u> 0	<u>Unknown</u> 8	

## SECTION VI. SELF-SCORING INSTRUCTIONS

Compute your percent correct score as follows:

Step 1. Give yourself a point for each correct response to each question in the test in which you are working.

Step 2. Subtract from this total a point for each excluded question that you have answered correctly. (Refer to the appropriate test results in Section V to identify excluded questions.) This will provide your total of points.

Step 3. Multiply your total of points by 100.

Step 4. Divide the sum of Step 3 by the number of accepted questions for the test in which you are working. (Remember not to count excluded questions.) The result will be your total percent score, which you can compare to the Norm Tables under Section IV.

<b>Example #1 Primary Care Medicine</b>	
Step 1: Record your points.	87
Step 2: Subtract the number of excluded questions that you have answered correctly.	$87 - 2 = 85$
Step 3: Multiply your total points by 100	$85 \times 100 = 8,500$
Step 4: Divide the result by 102, which is the total number of questions minus the number of excluded questions.	$8,500 \div 102$
Total percent correct score	83.33%

<b>Example #2 Rheumatology</b>	
Step 1: Record your points.	60
Step 2: Subtract the number of excluded questions that you have answered correctly.	$60 - 6 = 54$
Step 3: Multiply your total points by 100	$54 \times 100 = 5,400$
Step 4: Divide the result by 68, which is the total number of questions minus the number of excluded questions.	$5,400 \div 68$
Total percent correct score	79.41%

Listed below are the number of published, excluded and accepted questions for each test in MKSAP 13. Excluded questions are those that have been determined, on the basis of prepublication test-takers' results, to be flawed, too ambiguous, or too subspecialized to be included in scoring.

<b>Subspecialty Section</b>	<b>Number of Published Questions</b>	<b>Number of Excluded Questions</b>	<b>Number of Accepted Questions</b>
Primary Care Medicine	121	19	102
Cardiovascular Medicine	117	10	107
Hematology/Oncology	113	5	108
Infectious Disease Medicine	97	16	81
Nephrology and Hypertension	95	9	86
Endocrinology and Metabolism	93	5	88
Gastroenterology and Hepatology	108	7	101
Neurology	75	3	72
Pulmonary Medicine and Critical Care	104	7	97
Rheumatology	77	9	68