

**Performance of Vision–Language Models Compared with 252 Medical Students on  
Text-only and Image-based Dermatology Examinations**

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**Supplementary Information 3. Undergraduate Dermatology Clerkship Image-based  
Examination**



This supplementary file contains the faculty-designed image-based questions from the undergraduate dermatology clerkship examination administered on 22 September 2023. The examination evaluates multiple domains of dermatologic reasoning, including elementary lesion recognition, descriptive reporting, diagnosis, etiology, differential diagnosis, treatment selection, and general dermatologic knowledge. All questions were originally written in Turkish and used without modification during AI model testing, with English translations provided for reference. The corresponding expert-validated weighted answer keys are provided in the associated supplementary tables.

**Table S3.1. Image-based elementary lesion recognition questions**

Original Turkish Question	English Translation
<p><b>1. Elementer Lezyon</b></p>  <p>Gördüğünüz elementer lezyonlar nelerdir? (3 kısa cevap, 5P)</p>	<p><b>1. Elementary lesion</b></p>  <p>Which elementary skin lesions do you observe? (3 short answers, 5P)</p>
<p><b>2. Elementer Lezyon</b></p>  <p>Gördüğünüz elementer lezyonlar nelerdir? (3 kısa cevap, 5P)</p>	<p><b>2. Elementary lesion</b></p>  <p>Which elementary skin lesions do you observe? (3 short answers, 5P)</p>







**Table S3.2. Image-based descriptive reporting questions**

Original Turkish Question	English Translation
<p><b>5. Tanımlanma</b></p>  <p>Klinik tabloyu tanımlayınız. (Uzun cevap, 5P)</p>	<p><b>5. Descriptive Reporting</b></p>  <p>Describe the clinical presentation. (Long answer, 5P)</p>



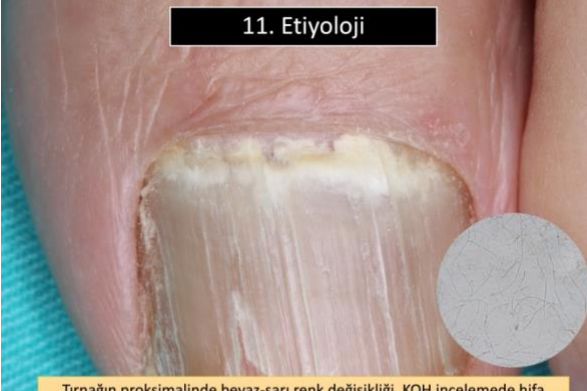
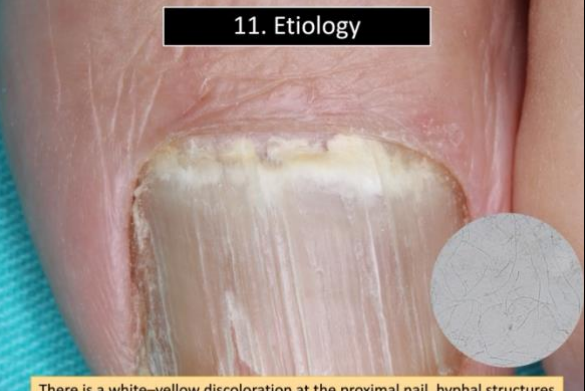


**Table S3.3. Image-based diagnosis questions**





Original Turkish Question	English Translation
<p><b>7. Tanı</b></p>  <p>7 yaşında bir kız çocuğu, iki haftadır çevresel olarak genişleyen bir lezyon ile başvuruyor. Tanınız nedir? (Kısa cevap, 5P)</p>	<p><b>7. Diagnosis</b></p>  <p>A 7-year-old girl presents with a lesion that has been expanding peripherally for two weeks. What is your diagnosis? (Short answer, 5P)</p>
<p><b>8. Tanı</b></p>  <p>47 yaşında kadın hastada birkaç aydır vücutta ve oral mukozada lezyonlar ile başvuruyor. DIF'te interstelüler IgG birikimi saptandı. En olası tanıyı yazınız. (Kısa cevap, 5 puan)</p>	<p><b>8. Diagnosis</b></p>  <p>A 47-year-old woman presents with lesions on the skin and oral mucosa for several months. DIF reveals intercellular IgG deposition. What is the most likely diagnosis? (Short answer, 5P)</p>





**Table S3.4. Image-based etiology questions**

Original Turkish Question	English Translation
<p style="text-align: center;"><b>10. Etiyoloji</b></p>  <p style="text-align: center;">Üç gündür mevcut olan bu ağrılı lezyonların en olası etiyolojik etkeni nedir? (Kısa cevap, 5 puan)</p>	<p style="text-align: center;"><b>10. Etiology</b></p>  <p style="text-align: center;">What is the most likely etiological agent responsible for these painful lesions present for three days? (Short answer, 5 points)</p>
<p style="text-align: center;"><b>11. Etiyoloji</b></p>  <p style="text-align: center;">Tırnağın proksimalinde beyaz-sarı renk değişikliği, KOH incelemede hifa yapıları görülmüş, kültürde Trichophyton rubrum üremesi saptanmıştır. Altta yatan etiyolojik etken nedir? (Kısa cevap, 5 P)</p>	<p style="text-align: center;"><b>11. Etiology</b></p>  <p style="text-align: center;">There is a white–yellow discoloration at the proximal nail, hyphal structures on KOH examination, and Trichophyton rubrum growth in culture. What is the underlying etiological factor? (Kısa cevap, 5 P)</p>

**Table S3.5. Image-based differential diagnosis questions**


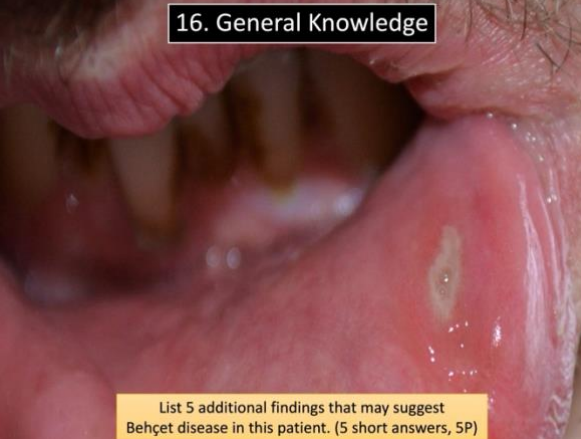

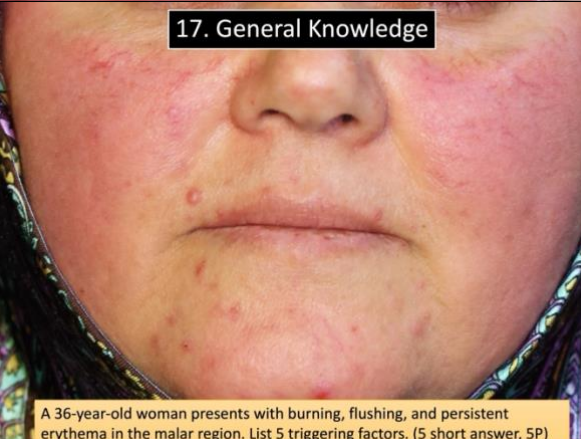
Original Turkish Question	English Translation
<p><b>12. Ayırıcı Tanı</b></p>  <p>72 yaşında erkek hastada iki yıldır mevcut nodüler bir lezyon bulunmaktadır. Ayırıcı tanıda düşünülmesi gereken 3 hastalığı yazınız. (3 kısa cevap, 5P)</p>	<p><b>12. Differential Diagnosis</b></p>  <p>A 72-year-old man presents with a nodular lesion persisting for two years. List 3 conditions to be considered in the differential diagnosis. (3 short answers, 5P)</p>
<p><b>13. Ayırıcı Tanı</b></p>  <p>Ağız içinde üç aydır devam eden lezyonları olan ve kilo kaybı bulunan hastada, ayırıcı tanıda düşünülmesi gereken 3 hastalığı yazınız. (3 kısa cevap, 5P)</p>	<p><b>13. Differential Diagnosis</b></p>  <p>In a patient with oral lesions persisting for 3 months and associated weight loss, list 3 conditions to be considered in the differential diagnosis. (3 short answers, 5P)</p>

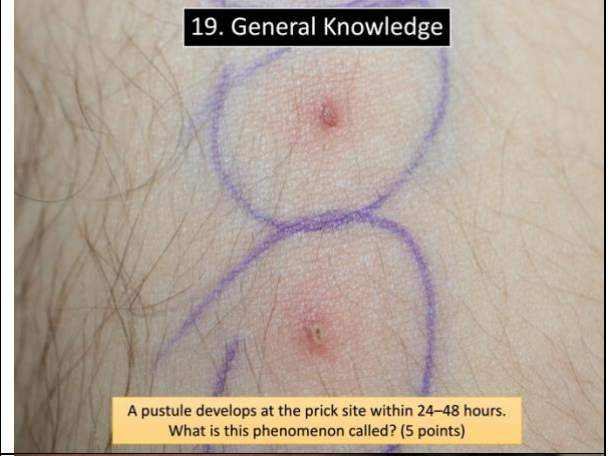
**Table S3.6. Image-based treatment questions**

Original Turkish Question	English Translation
<p><b>14. Tedavi</b></p>  <p>Bu hastada ön planda düşünülen hastalığa yönelik ilk tedavi seçeneğiniz ne olurdu? (Short answer, 5P)</p>	<p><b>14. Treatment</b></p>  <p>What would be your first-line treatment option for the condition primarily considered in this patient? (Short answer, 5P)</p>



**Table S3.7. Image-based general knowledge questions**

Original Turkish Question	English Translation
 <p>16. Genel Bilgi</p> <p>Bu hastada Behçet hastalığını düşündürecek olası 5 ek bulguyu yazınız. (5 kısa cevap, 5P)</p>	 <p>16. General Knowledge</p> <p>List 5 additional findings that may suggest Behçet disease in this patient. (5 short answers, 5P)</p>
 <p>17. Genel Bilgi</p> <p>36 yaşında kadın hastada malar bölgede yanma, flushing, kalıcı eritem mevcuttur. Bu durumu tetikleyici 5 faktörü yazınız (5 kısa cevap, 5P)</p>	 <p>17. General Knowledge</p> <p>A 36-year-old woman presents with burning, flushing, and persistent erythema in the malar region. List 5 triggering factors. (5 short answer, 5P)</p>



**Table S3.8. Image-based examination weighted answer key**

#	5 points	3 points	2 points	1 point
1.	—	—	Nodule, ulcer	Crust, erythema, erosion
2.	—	—	Papule, plaque	Scale, erythema
3.	—	—	Nodule, papule	Macule, patch
4.	—	—	Papule, pustule	Comedone, crust, scar
5.	—	—	—	Each correctly reported descriptive feature
6.	—	—	—	Each correctly reported descriptive feature
7.	Tinea corporis	—	—	—
8.	Pemphigus vulgaris	—	—	—
9.	Alopecia areata	—	—	—
10.	Varicella-zoster virus (VZV)	—	—	—
11.	Human immunodeficiency virus (HIV)	—	—	—
12.	—	Basal cell carcinoma	Squamous cell carcinoma	Keratoacanthoma, cutaneous adnexal tumor, merkel cell tumor
13.	—	—	Pemphigus, pemphigoid	Erosive lichen planus, SLE, candidiasis
14.	Benzathine Penicillin G	—	—	—
15.	—	—	—	Permethrin lotion, Wilkinson ointment, sulfur compounds, ivermectin ointment and tablets, benzyl benzoate, lindane
16.	—	—	—	Uveitis, genital ulcers, acneiform skin lesions, erythema nodosum, thrombophlebitis, positive pathergy test, neurological involvement
17.	—	—	—	Sunlight, heat, cold, wind, spicy foods, alcohol and smoking, hot beverages such as tea and coffee, psychogenic stress, inappropriate cosmetic products, intense physical exercise
18.	—	—	Hutchinson sign, ulceration	Nail plate dystrophy
19.	Pathergy reaction	—	—	—
20.	Carpet tack sign	—	—	—