Supplementary Table 1. List of questions related to vitreoretinal diseases

Retinal detachment-pathogenesis

1. What is retinal detachment?
2. How can vitreoretinal pathways contribute to retinal detachment?
3. What role does ocular trauma play, and how does it trigger retinal detachment?
4. How does the aging process affect the risk of retinal detachment?
5. What is the relationship between retinal detachment and genetic factors?
6. What is the role of inflammatory processes in the development of retinal detachment?
7. How is the increased risk of retinal detachment in myopia explained?
8. What is the relationship between diabetic retinopathy and retinal detachment?
9. What is the association between retinal detachment and age-related macular degeneration?
10. What are the rare causes of retinal detachment?

Retinal detachment-risk factors

11. Which factors increase the risk of retinal detachment?
12. How do eye surgeries and procedures affect the risk of retinal detachment?
13. How is the risk of retinal detachment evaluated in individuals who have experienced trauma?
14. How do myopia and hyperopia affect the risk of retinal detachment?
15. How is genetic predisposition to retinal detachment determined?
16. What preventive measures can be taken to reduce the risk of retinal detachment?
17. Which age groups are at higher risk for retinal detachment?
18. What can be done to reduce the risk of retinal detachment after eye trauma?
19. What are the recommendations for reducing the risk of retinal detachment in diabetic patients?
20. Are there differences in the risk of retinal detachment between men and women?

Retinal detachment-clinical presentation

21. What are the typical symptoms of retinal detachment?
22. When do the symptoms of retinal detachment appear?
23. What factors may influence the symptoms of retinal detachment?
24. What are the early signs of retinal detachment?
25. How quickly do the symptoms of retinal detachment develop?
26. In which age groups are the symptoms of retinal detachment more common?
27. Can eye fatigue and other eye problems be symptoms of retinal detachment?
28. What are the differences between the symptoms of retinal detachment and other eye diseases?
29. What are the silent signs of retinal detachment?
30. How common are visual changes in individuals with retinal detachment?

Retinal detachment-diagnosis

31. How is retinal detachment diagnosed?
32. What are the signs of retinal detachment during an eye examination?
33. What imaging tests are used to diagnose retinal detachment?
34. How are different types of retinal detachment diagnosed?
35. What clinical tests are performed to diagnose retinal detachment?
36. How can measuring intraocular pressure help in diagnosing retinal detachment?
37. How long does it take to diagnose retinal detachment?
38. What devices are used to diagnose retinal detachment?
39. What symptoms does the ophthalmologist use to diagnose retinal detachment?
40. What steps are taken after the diagnosis of retinal detachment?

Retinal detachment-treatment/prevention

41. How is retinal detachment treated?
42. How effective is eye surgery in treating retinal detachment?
43. What types of medications are used for the treatment of retinal detachment?
44. What surgical procedures are used in the treatment of retinal detachment?
45. What complications may occur after retinal detachment surgery?
46. What lifestyle changes can help prevent retinal detachment?
47. What types of rehabilitation programs are applied for the treatment of retinal detachment?
48. What eye health measures should be taken to prevent retinal detachment?
49. What medications are used in the treatment of retinal detachment?
50. What follow-up and control are necessary after retinal detachment surgery?

Retinal detachment - prognosis

51. Is vision loss permanent after retinal detachment?
52. How long can visual recovery take in individuals with retinal detachment?
53. What are the visual recovery rates after retinal detachment surgery?
54. What are the long-term visual outcomes in individuals with retinal detachment?
55. How soon should retinal detachment be treated after diagnosis?

Macular hole-pathogenesis

1. What is a macular hole?
2. How does the macular hole formation process occur?
3. What is the anatomical structure of a macular hole?
4. What role does vitreoretinal traction play in the formation of a macular hole?
5. How does aging influence the development of a macular hole?
6. How might collagen structures contribute to the formation of a macular hole?
7. Can ocular trauma increase the risk of a macular hole?
8. What effects can interstitial fluid changes have on the pathogenesis of a macular hole?

Macular hole-risk factors

9. What are the main risk factors influencing macular hole development?
10. How does age affect the risk of macular hole formation?
11. What is the risk of developing a macular hole after cataract surgery?
12. How do retinal degenerative diseases affect macular hole formation?
13. What is the role of myopia in the development of a macular hole?
14. Can genetic predisposition increase the risk of a macular hole?
15. How does smoking affect the formation of a macular hole?

Macular hole-clinical presentation

16. What are the early symptoms of a macular hole?
17. How are the clinical signs of a macular hole evaluated?
18. How are the symptoms of visual loss due to a macular hole detected?
19. What are the stages of the macular hole development process?
20. Are visual changes among the symptoms of a macular hole?
21. What are the clinical signs at different stages of a macular hole?

Macular hole-diagnosis

22. How is a macular hole defined and classified?
23. How can an eye examination detect a macular hole?
24. What do imaging tests for a macular hole include?
25. How effective is optical coherence tomography (OCT) in diagnosing a macular hole?
26. How is a macular hole diagnosed with fluorescein angiography?

Macular hole-treatment/prevention

27. What are the surgical treatment options for a macular hole?
28. What are the pharmacotherapy options for the treatment of a macular hole?
29. What complications may occur after macular hole surgery?
30. What are the non-surgical treatment methods for a macular hole?
31. How does the rehabilitation process work after macular hole surgery?

Macular hole-prognosis

32. What are the success rates of macular hole treatment?
33. How long may visual recovery take after macular hole treatment?
34. What are the long-term visual outcomes after macular hole surgery?
35. What is the recurrence risk of a macular hole?

Epiretinal membrane-pathogenesis

1. What is an epiretinal membrane?
2. What is the pathogenesis of the epiretinal membrane?
3. What risk factors influence the development of an epiretinal membrane?
4. Is there a genetic predisposition to epiretinal membrane?
5. What is the role of age in the development of an epiretinal membrane?
6. What is the impact of ocular trauma on the development of an epiretinal membrane?
7. How is the pathogenesis of the epiretinal membrane investigated?

Epiretinal membrane-risk factors

8. What are the risk factors for an epiretinal membrane?
9. What is the impact of ocular trauma on the development of an epiretinal membrane?
10. What is the role of age in the development of an epiretinal membrane?

Epiretinal membrane-clinical presentation

11. What are the clinical signs of an epiretinal membrane?
12. What are the early signs of an epiretinal membrane?
13. What are the progressive signs of an epiretinal membrane?
14. Which eye problems resemble the symptoms of an epiretinal membrane?

Epiretinal membrane-diagnosis

15. How is an epiretinal membrane defined and classified?
16. What eye examinations are performed to diagnose an epiretinal membrane?
17. What are the imaging methods for an epiretinal membrane?

Epiretinal membrane-treatment/prevention

18. How is an epiretinal membrane treated?
19. How is epiretinal membrane surgery performed?
20. Who are the suitable candidates for epiretinal membrane surgery?
21. When should patients visit an ophthalmologist after epiretinal membrane surgery?
22. What are the non-surgical treatment options for an epiretinal membrane?
23. What is the natural healing potential of an epiretinal membrane?
24. What alternative methods are available for the treatment of an epiretinal membrane?
25. What rehabilitation methods can be applied in the treatment of an epiretinal membrane?

Epiretinal membrane - Prognosis

26. What is the recovery time for vision after epiretinal membrane surgery?
27. What is the risk of recurrence after epiretinal membrane surgery?
28. What is the prognosis after epiretinal membrane surgery?
29. What lifestyle changes are recommended after epiretinal membrane surgery?
30. What should patients pay attention to in daily life after epiretinal membrane surgery?
31. What is the risk of eye infection after epiretinal membrane surgery?

Supplementary Table 2. Correlation analysis of readability metrics across LLM-chatbots for vitreoretinal diseases

Retinal detachment		Pearson correlation	Sig. (2-tailed)	95% confidence intervals (2-tailed)[b]	
				Lower	Upper
Flesch kincaid grade level	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.067	0.625	-0.334	0.209
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.053	0.699	-0.223	0.321
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.233	0.087	-0.475	0.043
	ChatGPT-4o-Gemini 1.5 Pro	0.004	0.976	-0.269	0.277
	ChatGPT-4o-Microsoft copilot	0.120	0.383	-0.158	0.380
	Gemini 1.5 Pro-Microsoft copilot	-0.125	0.362	-0.385	0.153
Gunning fog index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.221	0.104	-0.466	0.055
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.123	0.370	-0.155	0.383
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.075	0.587	-0.341	0.202
	ChatGPT-4o-Gemini 1.5 pro	-0.246	0.070	-0.486	0.028
	ChatGPT-4o-Microsoft copilot	0.016	0.906	-0.258	0.288
	Gemini 1.5 Pro-Microsoft copilot	-0.123	0.371	-0.383	0.155
Coleman liau index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.174	0.203	-0.427	0.103
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.104	0.449	-0.174	0.366
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.034	0.803	-0.241	0.304
	ChatGPT-4o-Gemini 1.5 Pro	0.211	0.122	-0.066	0.457
	ChatGPT-4o-Microsoft copilot	0.076	0.582	-0.201	0.342
	Gemini 1.5 Pro-Microsoft copilot	-0.137	0.317	-0.395	0.141
SMOG index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	0.194	0.155	-0.083	0.444
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.029	0.836	-0.246	0.299
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.142	0.300	-0.400	0.136
	ChatGPT-4o-Gemini 1.5 Pro	0.110	0.425	-0.168	0.371
	ChatGPT-4o-Microsoft copilot	-0.080	0.560	-0.346	0.197
	Gemini 1.5 Pro-Microsoft copilot	0.102	0.460	-0.176	0.364
Flesch reading ease score	ChatGPT-4o mini (Open AI)-ChatGPT-4o	0.052	0.706	-0.224	0.320
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	-0.018	0.895	-0.290	0.256
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.032	0.818	-0.302	0.243
	ChatGPT-4o -Gemini 1.5 Pro	-0.139	0.312	-0.397	0.139
	ChatGPT-4o-Microsoft copilot	-0.045	0.743	-0.314	0.230
	Gemini 1.5 Pro-Microsoft copilot	0.040	0.774	-0.236	0.309
Epiretinal membrane		**Pearson correlation**	**Sig. (2-tailed)**	**95% confidence intervals (2-tailed)[b]**	
				Lower	**Upper**
Flesch kincaid grade level	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.099	0.595	-0.447	0.275
	ChatGPT-4o mini (Open AI)- Gemini 1.5 Pro	0.140	0.452	-0.236	0.479
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.025	0.893	-0.342	0.385
	ChatGPT-4o-Gemini 1.5 Pro	-0.082	0.661	-0.433	0.290
	ChatGPT-4o-Microsoft copilot	0.192	0.300	-0.184	0.520
	Gemini 1.5 Pro-Microsoft copilot	-0.398	**0.027**	-0.665	-0.039
Gunning fog index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.003	0.988	-0.366	0.361
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.360	**0.047**	-0.005	0.640
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.342	0.059	-0.024	0.628
	ChatGPT-4o-Gemini 1.5 Pro	-0.189	0.309	-0.517	0.188
	ChatGPT-4o-Microsoft copilot	0.121	0.518	-0.254	0.464
	Gemini 1.5 Pro-Microsoft Copilot	0.088	0.638	-0.285	0.438
Coleman liau index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.167	0.369	-0.501	0.209
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.116	0.533	-0.259	0.461
	ChatGPT-4o mini (Open AI)-Microsoft Copilot	-0.007	0.971	-0.370	0.358
	ChatGPT-4o -Gemini 1.5 Pro	-0.134	0.474	-0.474	0.242
	ChatGPT-4o-Microsoft Copilot	0.514	**0.003**	0.185	0.740
	Gemini 1.5 Pro-Microsoft Copilot	0.003	0.988	-0.362	0.366
SMOG index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	0.209	0.258	-0.167	0.533
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.087	0.641	-0.286	0.437
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.035	0.852	-0.333	0.394
	ChatGPT-4o-Gemini 1.5 Pro	0.067	0.718	-0.304	0.421
	ChatGPT-4o-Microsoft copilot	-0.263	0.152	-0.572	0.111
	Gemini 1.5 Pro-Microsoft copilot	0.015	0.934	-0.350	0.377
Flesch Reading Ease Score	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.231	0.212	-0.549	0.145
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	-0.206	0.265	-0.530	0.170
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-.157	0.399	-0.493	0.219
	ChatGPT-4o-Gemini 1.5 Pro	0.050	0.790	-0.320	0.406
	ChatGPT-4o-Microsoft copilot	-0.480	**0.006**	-0.719	-0.141
	Gemini 1.5 Pro-Microsoft copilot	0.058	0.758	-0.313	0.413
Macular hole		**Pearson correlation**	**Sig. (2-tailed)**	**95% Confidence Intervals (2-tailed)[b]**	
				Lower	**Upper**
Flesch kincaid grade level	ChatGPT-4o mini (Open AI)-ChatGPT-4o	0.020	0.909	-0.325	0.360
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	-0.185	0.288	-0.496	0.168
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.162	0.352	-0.191	0.478
	ChatGPT-4o-Gemini 1.5 Pro	-0.215	0.216	-0.519	0.138
	ChatGPT-4o-Microsoft Copilot	0.129	0.459	-0.223	0.452
	Gemini 1.5 Pro-Microsoft Copilot	-0.102	0.560	-0.429	0.249
Gunning fog index	ChatGPT-4o mini (Open AI)- ChatGPT-4o	0.194	0.264	-0.159	0.503
	ChatGPT-4o mini (Open AI)- Gemini 1.5 Pro	0.154	0.378	-0.199	0.471
	ChatGPT-4o mini (Open AI) – Microsoft copilot	-0.148	0.395	-0.467	0.204
	ChatGPT-4o -Gemini 1.5 Pro	0.234	0.175	-0.117	0.534
	ChatGPT-4o-Microsoft copilot	0.138	0.428	-0.214	0.459
	Gemini 1.5 Pro-Microsoft copilot	-0.222	0.200	-0.524	0.130
Coleman liau index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	0.023	0.894	-0.322	0.363
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	-0.035	0.840	-0.373	0.311
	ChatGPT-4o mini (Open AI)-Microsoft copilot	0.114	0.514	-0.237	0.439
	ChatGPT-4o -Gemini 1.5 Pro	0.017	0.921	-0.327	0.358
	ChatGPT-4o-Microsoft copilot	0.105	0.549	-0.246	0.432
	Gemini 1.5 Pro-Microsoft copilot	-0.210	0.226	-0.515	0.143
SMOG index	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.219	0.207	-0.522	0.134
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.066	0.704	-0.282	0.400
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.061	0.730	-0.395	0.288
	ChatGPT-4o-Gemini 1.5 Pro	0.183	0.292	-0.170	0.495
	ChatGPT-4o-Microsoft copilot	-0.049	0.780	-0.385	0.298
	Gemini 1.5 Pro-Microsoft copilot	-0.273	0.113	-0.563	0.077
Flesch reading ease score	ChatGPT-4o mini (Open AI)-ChatGPT-4o	-0.059	0.736	-0.393	0.289
	ChatGPT-4o mini (Open AI)-Gemini 1.5 Pro	0.003	0.987	-0.340	0.345
	ChatGPT-4o mini (Open AI)-Microsoft copilot	-0.260	0.131	-0.553	0.090
	ChatGPT-4o-Gemini 1.5 Pro	0.039	0.825	-0.308	0.376
	ChatGPT-4o-Microsoft Copilot	-0.197	0.257	-0.505	0.156
	Gemini 1.5 Pro-Microsoft Copilot	0.053	0.763	-0.295	0.388

AI: Artificial intelligence.

Supplementary Table 3. Overview of Response Length from LLM-chatbots to retinal detachment, epiretinal membrane, and macular hole

		Response length (words)					Response length (characters)				
		Mean	SD	Minimum	Median	Maximum	Mean	SD	Minimum	Median	Maximum
RD (n=55)	ChatGPT-4o mini (Open AI)	254.0	83.1	115.0	257.0	588.0	1381.9	443.8	113.0	1429.0	2480.0
	ChatGPT-4o	269.9	65.3	146.0	268.0	412.0	1400.6	357.1	784.0	1416.0	2235.0
	Gemini 1.5 pro	266.4	78.2	155.0	247.0	416.0	1371.9	373.9	825.0	1296.0	2193.0
	Microsoft copilot	228.5	69.8	136.0	213.0	423.0	1432.4	402.0	758.0	1358.0	2276.0
		0.016					0.862				
ERM (n=31)	ChatGPT-4o mini (Open AI)	222.8	49.1	106.0	221.0	338.0	1280.0	315.2	559.0	1286.0	2003.0
	ChatGPT-4o	258.1	68.7	144.0	257.0	415.0	1320.7	348.4	848.0	1324.0	2173.0
	Gemini 1.5 pro	279.5	78.4	142.0	289.0	415.0	1442.1	377.3	860.0	1425.0	2267.0
	Microsoft copilot	281.4	82.0	151.0	273.0	427.0	1444.2	408.8	786.0	1366.0	2284.0
		0.004					0.180				
MH (n=35)	ChatGPT-4o Mini (Open AI)	208.7	54.0	102.0	202.0	306.0	1122.7	355.7	196.0	1165.0	1714.0
	ChatGPT-4o	246.2	77.5	143.0	243.0	414.0	1467.7	362.5	785.0	1453.0	2234.0
	Gemini 1.5 Pro	269.8	71.3	140.0	273.0	421.0	1395.1	420.1	786.0	1289.0	2260.0
	Microsoft Copilot	243.6	65.1	141.0	246.0	422.0	1548.9	401.5	839.0	1534.0	2295.0
		0.003					**<0.001**				

RD: Retinal detachment, ERM: Epiretinal membrane, MH: Macular hole; SD: Standard deviation.