Supplementary Material

Supplementary Table S1. Questions collected from the patients

1. Will I need dialysis?	101. My father died of kidney disease at 49—how long will I live?*	201. Does my past prostate surgery affect this disease?
2. What should I change in my daily life?	102. My left kidney functions at 40%; does it affect the right one?*	202. Does COPD affect the kidneys?*
3. Will my life expectancy change?	103. Is there a treatment for chronic kidney failure?*	203. Because my potassium is high, which foods should I avoid?*
4. Is it necessary to take blood pressure medication to protect my kidneys?*	104. I sometimes have forgetfulness—what can I do?	204. Do cysts in my kidneys have a risk of cancer?
5. Does my heart disease negatively affect my kidneys?*	105. Which painkillers can I take?*	205. Are back pains behind the kidneys related to kidney disease?*
6. Did the operation on my kidney cause chronic kidney disease?*	106. What's the relationship between diabetes and kidneys?*	206. I feel pain in my vagina after urination—should I go to gynecology?*
7. How does exercise and losing weight affect my kidney function?*	107. Is there a connection between thyroid and kidneys?*	207. How much water should I drink?*
8. Is coronary artery disease an obstacle to exercising?	108. Does my thyroid medication harm my kidneys?	208. What can I do to lower creatinine levels?
9. My diabetes medication says it's harmful to kidneys—should I switch to insulin?	109. How should I eat?*	209. Which antibiotics should I use for my diabetic foot wound?
10. Do my current creatinine levels indicate a need for dialysis?*	110. I feel tired and weak—what should I do?	210. Should I go to infection or endocrinology for diabetic foot?
11. Which foods should I avoid?	111. I restrict salt—how much should I consume?	211. My B12 is low—should I take supplements?
12. What should I pay attention to in order to avoid the risk of dialysis?	112. Does living with one kidney cause problems?*	212. Doctors say "your kidneys are borderline"—is that true?*
13. Are chemotherapy drugs very harmful to the kidneys?	113. What should I watch for with blood pressure?	213. The contrast for CT—will it harm my kidneys, what do you recommend?
14. I frequently have burning with urination—why?	114. Is my disease hereditary?	214. Is drinking 7–8 liters of water a day dangerous for kidneys?*
15. Does eating too much meat increase uric acid?*	115. I have headaches—could it be from my kidneys?*	215. I saw a nephrologist once—do I need regular follow-ups?
16. Does insulin affect the kidneys?*	116. Can my kidney disease improve?*	216. Should I bring my blood pressure readings with me?
17. Will I eventually have to undergo dialysis?	117. What should I eat?	217. What can I do to lower my blood pressure?
18. Are there improvements in my lab results?	118. Will I need a transplant in the future?	218. Should I take vitamin D, how often per week?*
19. I feel good—should I continue my diet like this?*	119. What's the effect of turnip juice on kidneys?	219. How should I manage my diet and water intake?
20. Is my vitamin D at the desired level?*	120. Is there anything I shouldn't eat?	220. Do I currently have protein leakage?
21. Are there improvements in my test results?	121. Is cycling harmful to kidneys?	221. Can antibiotics cause protein leakage?*
22. How should I continue my diet?*	122. When will I be able to stop these medications?	222. How should I manage water intake?
23. How much water should I drink?	123. What percentage of my kidney is functioning?*	223. How should I eat?*
24. Cardura 4 mg made me faint—can I stop taking it?	124. Could I be a transplant candidate in the future?	224. Can you prescribe an alternative to uricoliz that's covered by insurance?
25. How does the antibiotic I'm using affect me?	125. At which stage does dialysis begin?	225. Can I start atorvastatin (cholesterol pill)?
26. How should I eat?*	126. What is the probability that I'll need a kidney transplant?*	226. I feel like urinating even with little urine—why?
27. I felt cold and shivering during dialysis—should I worry?	127. What are the positive and negative effects of diabetes drugs on kidneys?*	227. Are there any worrying abnormalities in my kidney tests?*
28. My urine is dark—is that from drinking too little water?*	128. Does tomato raise blood sugar?	228. I stopped some of my medicines—what should I do?
29. Should I take vitamin D every day?*	129. Do carbohydrates raise sugar and harm kidneys?	229. Which medications should I continue?
30. I had urinary burning before—now it's gone; what was it?	130. Does kidney failure cause anemia?*	230. Why do I feel tired and weak?
31. How much water should I drink?*	131. How long can I live with this disease?	231. What should I do if my cardiologist changes my meds?

32. How can I lower my HbA1c?	132. I drink alcohol—can I continue?	232. Are my results better than last visit?*
33. Is the decrease in protein leakage a good sign?	133. If I smoke, is it harmful?	233. Does protein leakage persist?*
34. My mother is on hemodialysis—will I also need dialysis?	134. Should I drink a lot of water?*	234. I lost 15 kg—is that good for my diabetes and kidneys?*
35. My urine sediment always shows RBCs; is that nephrology-related?	135. Will I have difficulty walking?	235. Norvasc makes me urinate a lot—what can I do?
36. Has my creatinine decreased?	136. Does this disease cause difficulty urinating?	236. I have anemia—how can I correct it?
37. How can I reduce protein leakage?*	137. What should I eat and drink?	237. Should I eat pumpkin seeds?
38. I gained weight after vitamin D—should I continue?	138. Itching on my nails—is it kidney-related?	238. How should I eat?*
39. How is my protein leakage progressing?*	139. I get back pain in cold weather—is it from this disease?*	239. My urine test showed infection but culture was negative—what should I do?
40. How should I eat?	140. What should I pay attention to?	240. Why does cholesterol rise?
41. I have no complaints—can I recover?	141. What types of food should I prefer while eating?*	241. I don't take BP meds but still have headache—what to do?
42. What happens if I stop colchicine?	142. My legs swell—what's the reason, what should I take?	242. I don't eat salty foods—why does cholesterol rise?
43. Will I need dialysis in the future?	143. What causes protein leakage in urine?*	243. Has my protein leakage decreased?*
44. Is heavy exercise harmful?	144. Should I continue my hypertension medication?	244. What should I do for anemia?
45. Is chemotherapy harmful to kidneys?	145. How can I lower triglycerides?	245. My right foot hurts—could it be from my back?*
46. Is constant abdominal pain related to my kidneys?*	146. How should I eat to prevent progression to advanced kidney disease?*	246. I don't eat sweets—what else can I do in diet?*
47. Are thyroid medications harmful to kidneys?	147. I drink alcohol—will I be harmed?	247. How many cigarettes would harm my kidneys?
48. Is frequent flu related to kidneys?*	148. Do fatty foods damage my kidneys?*	248. What is protein leakage and why does it happen?*
49. What if I forget my BP medication?	149. Do cold weather conditions harm my kidneys?*	249. Are my creatinine and protein levels very high?*
50. Will creatinine continuously increase?	150. My hands tremble—is that due to the disease?	250. What can I do to lower creatinine?
51. Is it safe to exercise with one kidney?*	151. Is my disease related to blood clotting?	251. Has my urea decreased or still high?
52. Are recurrent urinary infections due to stones?	152. What foods should I consume most?	252. How is my condition—what should I avoid eating?
53. Could fatigue and weakness be due to my kidneys?	153. I don't drink much water—what happens as a result?*	253. My BP is stable—should I continue Cardura?
54. Can it be treated with medication?*	154. When I catch a cold, my kidneys hurt—is that normal?*	254. I have no pain—why am I a kidney patient?*
55. What should I especially watch for in my meals?*	155. I had bloodletting in August—could that cause issues?	255. What foods should I avoid?
56. Is my potassium high because of kidneys?*	156. Why do I get back pain?*	256. Is it related to blood pressure?
57. My BP keeps rising—from kidneys or my diet?*	157. Why do I sometimes feel burning during urination?	257. What should I pay attention to in my diet?*
58. Can elevated creatinine return to normal?	158. What should I avoid eating/drinking for high creatinine?	258. How much water should I drink?*
59. Can my kidneys suddenly fail?*	159. I was told I have sand in my kidney—what to do?	259. Will I have to stay on protein-restricted diet forever?*
60. Does hypertension affect the kidneys?	160. How much water should I drink?*	260. Are my constant leg pains kidney-related?*
61. In what situations is kidney transplantation necessary?	161. What should I watch in foods?	261. Does smoking harm my kidneys?
62. How is dialysis performed?	162. What is protein leakage?	262. Can I skip my antipotassium drink?
63. When will I start dialysis?	163. What percentage of my kidney works?*	263. Will I have to go on dialysis?
64. What can we do for protection?	164. Is there a new drug that reduces protein leakage?*	264. Can I take painkillers?*
65. How will my disease progress—will I need dialysis?	165. What are the harms of high cholesterol for me?	265. Will creatinine keep increasing?
66. Is there no chance of regression?	166. What cold medicine do you recommend?	266. My hands and feet are always swollen.
67. What should I eat?	167. Is my disease related to hypertension?	267. Is hypertension related to kidneys?*
68. What should my blood pressure be?	168. Is my disease related to infection?	268. Does cancer harm the kidneys?*
69. Is my disease curable?	169. Is frequent urination related to my disease?	269. Does diabetes affect kidneys?*
70. How should I arrange my diet?	170. Does kidney disease cause excessive sweating?*	270. Can I take antibiotics?
71. Does this disease shorten my life?	171. Does creatinine change with diet?*	271. How can I apply for kidney transplant?*

72. What should I consume nutritionally?*	172. How can I fix protein leakage?*	272. How many years can I live?
73. Which medications should I take?	173. What should I do to stop kidney failure progression?*	273. Can I take herbal treatments?
74. Will I have to take these medicines continuously?	174. How much do kidneys affect my blood results?*	274. Does walking improve creatinine?
75. What stage is my disease in?	175. Will my meds dissolve kidney stones?*	275. How much water should I drink per day?*
76. What should I eat and drink for my condition?	176. Is my cholesterol medication beneficial for kidneys?	276. Can I take painkillers?*
77. How much will this disease affect my life?	177. How are my kidneys doing?*	277. Do diabetes drugs harm kidneys?
78. Can I take my vitamin D?*	178. Is high cholesterol kidney-related?*	278. Does smoking raise creatinine?
79. What should I eat since I have one kidney?*	179. What causes vitamin deficiency?	279. Is frequent illness related to kidneys?*
80. I stopped some medications for three months—could that cause problems?	180. How can I stop urinary burning?	280. Is hypertension due to kidneys?
81. Has my creatinine decreased, is protein leakage continuing?*	181. My surgical site hurts—why?*	281. What can I do to improve anemia?
82. I get urinary burning and cramps when I catch a cold—why?*	182. My kidneys ache—do I have stones?*	282. Will lupus heal?
83. How should I give my lab samples?	183. How can I prevent increased protein leakage?*	283. Is constant weakness due to disease?
84. How should I eat and how much water should I drink?*	184. How long will I live with this disease?	284. Can I take vitamin D?*
85. I boil broccoli twice a week and drink the water—any harm?*	185. I always eat unsalted food—how long to continue?*	285. What stage is my disease?
86. For what purpose were these tests ordered?	186. I'm curious about my thyroid condition.	286. If I start dialysis, how many days per week?
87. What are the effects of my abnormal blood results?	187. My mom has Sjögren and lupus—does it affect me?	287. What should I watch for in meals?*
88. What causes high blood pressure?	188. Should I visit urology?	288. How much water should I drink?*
89. What causes kidney-related pain?*	189. Why am I so uncomfortable in my stomach?*	289. I sometimes have kidney pain—why?*
90. Why did my kidneys shrink?*	190. What should I do about protein leakage?*	290. How much salt should I add to food?*
91. Can my kidneys return to normal size?*	191. I don't leak urine but urinate often—why?	291. What should I take for anemia?
92. I was prescribed a diuretic—what should I do next?	192. One kidney is big—does it affect the other?	
93. How can I lower my creatinine?	193. I occasionally have cramps—is it kidney-related?*	
94. How can I reduce protein leakage?*	194. They said I have three kidneys in Germany—should I remove one?	
95. Will I need dialysis?	195. Does diabetes affect the eyes?	
96. I have memory problems—is it due to my disease?	196. How can I keep my blood pressure and blood sugar under control?	
97. Will I need dialysis?	197. What else can I do to reduce protein leakage?*	
98. How can I get rid of leg swelling?	198. I have back pain—can I have physical therapy?*	
99. I have difficulty climbing stairs due to swelling—what should I do?	199. I taste salt in my mouth in the mornings—is it from the kidneys?*	
100. My left kidney is shrunken—how is my prognosis?*	200. I urinate every hour at night—why?	

The questions marked with (*) were asked to ChatGPT and Gemini.

Supplementary Table S2. Representative examples illustrating the QAMAI scoring process by two independent nephrology specialists

	ChatGPT				Gemini			
Ex.	**Nephrologist 1 Scores**	**Nephrologist 2 Scores**	**Total Score**	**Rating**	**Nephrologist 1 Scores**	**Nephrologist 2 Scores**	**Total Score**	**Rating**
1	4/4/4/4/1/4	4/4/4/4/1/4	**21**	Good	3/3/3/3/1/3	5/4/5/5/1/5	**20.5**	Good
2	5/5/5/3/1/4	5/5/4/4/1/5	**23.5**	Good	5/3/4/5/1/3	5/4/5/4/1/5	**22.5**	Good

Abbreviations: Ex. = Example number; Scores presented as Accuracy/Clarity/Relevance/Completeness/Citation/Usefulness (each dimension scored 1-5)

QAMAI Rating Categories: Excellent (26-30), Good (21-25), Moderate (16-20), Poor (11-15), Very Poor (6-10)

Example Questions:

Example 1: "Do I need blood pressure medication to protect my kidneys?" (Medical Condition and Treatment category)

Example 2: "Does eating a lot of meat increase uric acid levels?" (Nutrition and Diet category)

Representative questions and the corresponding responses generated by ChatGPT and Gemini are presented below.

Example 1: Do I need blood pressure medication to protect my kidneys?

ChatGPT:

Yes, using blood pressure medication is often necessary to protect your kidneys, especially if you have high blood pressure (hypertension). High blood pressure can damage your kidneys and accelerate the progression of chronic kidney disease (CKD). The reverse is also true: kidney disease can raise blood pressure. Therefore, blood

pressure medications are important both for controlling blood pressure and for protecting kidney health.

The Effect of Blood Pressure on Kidney Health

Harms of High Blood Pressure:

- It damages the small blood vessels in the kidneys (glomeruli), which impairs kidney function.
- It increases protein leakage in the urine (proteinuria), accelerating kidney damage.

Why Blood Pressure Rises in Kidney Disease:

- When the kidneys cannot excrete excess salt and fluid, blood volume increases, leading to higher blood pressure.

Why Is Blood Pressure Medication Necessary?

1. **Kidney-Protective Medications:**
    - ACE inhibitors (e.g., enalapril, lisinopril) and ARBs (e.g., losartan, valsartan) not only lower blood pressure but also reduce protein leakage in the kidneys.
    - These medications protect the filtering units of the kidneys and slow disease progression.
2. **Reducing Kidney Stress by Lowering Blood Pressure:**
    - Keeping blood pressure within target ranges prevents harmful pressure on the kidneys (generally recommended to be below 130/80 mmHg).
3. **Preventing Kidney Failure:**
    - Good blood pressure control can slow progression to end-stage kidney disease.

Who Should Use Blood Pressure Medication?

- **If You Have High Blood Pressure:** Blood pressure ≥130/80 mmHg.

- **If You Have Protein in the Urine:** Proteinuria indicates kidney damage and can be controlled with these medications.
- **If You Have Diabetes or Chronic Kidney Disease:** Blood pressure medications are especially important to preserve kidney function in these conditions.

What Should You Pay Attention To?

1. **Doctor's Guidance:** Blood pressure medications should be used under medical supervision. Dose adjustments are made by your doctor.
2. **Blood Tests:** These medications may increase potassium levels or affect kidney function, so regular monitoring is necessary.
3. **Lifestyle Changes:**
    - Reduce salt intake.
    - Maintain a balanced diet and adequate fluid intake.
    - Exercise regularly.

Conclusion

Blood pressure medications are an important treatment to protect your kidneys and slow the progression of kidney disease. Your doctor will assess your blood pressure and kidney health to create an appropriate treatment plan. Regular follow-up and adherence to treatment help protect your kidney health in the long term.

Gemini:

The question *"Do I need blood pressure medication to protect my kidneys?"* is a very important one, especially for people who have high blood pressure or are at risk of kidney disease. The answer is **yes—under certain circumstances, blood pressure medication is necessary to protect the kidneys**.

Effect of High Blood Pressure on the Kidneys

High blood pressure (hypertension) can damage the small blood vessels in the kidneys, leading to impaired kidney function and, over time, chronic kidney disease (CKD). For this reason, keeping blood pressure under control is critical for kidney health.

Kidney-Protective Effects of Blood Pressure Medications

Blood pressure medications reduce the pressure on the kidneys by lowering blood pressure and can slow the progression of kidney damage. Certain classes of blood pressure medications—**ACE inhibitors** and **ARBs**—have been shown to provide additional kidney-protective effects.

- **ACE Inhibitors and ARBs:**
  These medications lower blood pressure by acting on the **Renin–Angiotensin–Aldosterone System (RAAS)**, a key hormonal system involved in blood pressure regulation. Beyond lowering blood pressure, they help reduce protein leakage in the urine (proteinuria) and slow the progression of kidney damage. For this reason, they are often the first-line choice in patients with diabetic nephropathy or proteinuria.

In Which Situations Is Blood Pressure Medication Necessary?

Blood pressure medication is generally recommended to protect the kidneys in the following situations:

- **Hypertension:** If your blood pressure is persistently **140/90 mmHg or higher**, your doctor may recommend medication.
- **Diabetes:** Diabetes is a major risk factor for kidney damage. Even if blood pressure is within normal limits, ACE inhibitors or ARBs may be prescribed to protect the kidneys.
- **Chronic Kidney Disease (CKD):** If you have CKD at any stage and proteinuria is present, ACE inhibitors or ARBs are usually recommended.

- **Proteinuria (Protein Leakage in Urine):** If protein is detected in your urine, blood pressure medication may be prescribed to reduce proteinuria and slow kidney damage, in addition to treating the underlying cause.

What You Should Know About Blood Pressure Medications

- **Use Under Medical Supervision:** These medications should always be taken under a doctor's guidance. Your doctor will determine the appropriate drug, dose, and regimen.
- **Possible Side Effects:** Like all medications, blood pressure drugs may have side effects. Your doctor will inform you about these and take measures to minimize them.
- **Regular Use Is Important:** To be effective, medications must be taken consistently as prescribed.
- **Lifestyle Changes Also Matter:** Medications alone may not be sufficient. Healthy eating, salt restriction, regular exercise, maintaining an ideal body weight, and avoiding smoking are also essential for blood pressure control and kidney protection.

Summary

In certain situations—particularly in the presence of hypertension, diabetes, chronic kidney disease, or proteinuria—blood pressure medication is necessary to protect the kidneys. However, the choice of medication and its use should always be determined in consultation with your doctor. These explanations are for general information only and do not replace medical advice. For personalized guidance regarding kidney health and blood pressure treatment, always consult your physician.

Example 2: Does eating a lot of meat increase uric acid levels?

ChatGPT:

Yes, eating large amounts of meat can increase uric acid levels in the blood. Meat—especially red meat and organ meats—contains high amounts of **purines**. When purines are metabolized in the body, they are converted into **uric acid**. If the kidneys cannot adequately filter and excrete uric acid, blood levels rise, which can lead to problems such as **gout** or **kidney stones**.

Factors Affecting Uric Acid Levels

1. **Meat and Animal Products:**
    - Red meat, organ meats (such as liver, kidney, and brain), and shellfish (such as shrimp and lobster) are rich in purines and can increase uric acid levels.
2. **Other Dietary Components:**
    - Alcohol—especially beer—and sugar-sweetened beverages containing fructose can also raise uric acid levels.
3. **Kidney Function:**
    - If the kidneys cannot efficiently filter uric acid, blood levels may increase.

Recommendations to Control Uric Acid Levels

1. **Choose Low-Purine Foods:**
    - Include vegetables, fruits, whole grains, and low-fat dairy products in your diet.
2. **Limit Meat Consumption:**
    - Consume red meat in moderation (e.g., once or twice per week).
    - White meat (such as chicken and turkey) contains lower purine levels but should still be consumed in limited amounts.
3. **Drink Plenty of Water:**
    - Adequate hydration helps eliminate uric acid through the urine.
4. **Exercise Regularly:**
    - A healthy lifestyle supports better control of uric acid levels.

Conclusion

Excessive meat consumption can raise uric acid levels in the blood and may be harmful to your kidneys. A balanced diet and limiting meat intake can help keep uric acid levels under control. Regular monitoring of uric acid levels and attention to dietary habits are important.

Gemini:

Yes, excessive meat consumption—especially red meat and organ meats—can significantly increase uric acid levels in the blood. Uric acid is a natural waste product formed when substances called **purines** are broken down in the body. Purines are found both in the body's own cells and in certain foods.

The Relationship Between Meat and Purines

Meat—particularly red meat (beef, lamb, mutton) and organ meats (such as liver, kidney, tripe, and brain)—contains high amounts of purines. Excessive intake of these foods leads to increased purine breakdown and, consequently, increased production of uric acid. Normally, the kidneys remove uric acid from the body through urine. However, when production is excessive or kidney function is impaired, uric acid begins to accumulate in the blood.

Consequences of High Uric Acid Levels (Hyperuricemia)

When blood uric acid levels rise above normal, this condition is called **hyperuricemia**. Although it often causes no immediate symptoms, it can lead to serious health problems over time:

- **Gout:** The most well-known consequence of hyperuricemia. Uric acid crystals accumulate in joints—most commonly in the big toe—causing severe pain, swelling, redness, and inflammation. These sudden and intense attacks are known as gout flares.

- **Kidney Stones:** Uric acid crystals can also accumulate in the kidneys, leading to kidney stone formation. Kidney stones may cause severe flank pain, blood in the urine, and urinary tract obstruction.
- **Kidney Disease:** Long-term, uncontrolled hyperuricemia can negatively affect kidney function and increase the risk of chronic kidney disease.

Who Is at Higher Risk?

The risk of uric acid elevation due to excessive meat consumption is higher in individuals with the following factors:

- Family history of gout or kidney stones
- Male sex
- Obesity or excess body weight
- Excessive alcohol consumption
- Use of certain medications such as diuretics or aspirin
- A diet rich in purines (high meat intake, seafood, sugary beverages)

What Should You Do?

- **Limit Meat Consumption:** Reduce intake of red meat and organ meats. Consume white meats (such as chicken and fish) in smaller portions and less frequently.
- **Eat a Healthy Diet:** Emphasize fruits, vegetables, whole grains, and fiber-rich foods.
- **Drink Plenty of Water:** Adequate hydration helps the kidneys excrete uric acid.
- **Restrict Alcohol:** Alcohol can increase uric acid levels.
- **Consult a Doctor:** If your uric acid levels are high or you have symptoms of gout, it is important to see a doctor. Your physician can provide appropriate treatment and dietary advice.

Summary

Excessive meat consumption—especially red meat and organ meats—can raise uric acid levels and increase the risk of gout, kidney stones, and kidney disease. Limiting meat intake, maintaining a healthy diet, drinking plenty of water, and restricting alcohol can help reduce this risk. If you have elevated uric acid levels or symptoms of gout, medical consultation is necessary. These explanations are for general informational purposes only and do not replace medical advice.