ERKNet Case-based eLearning Module
Instruction Manual

ERKNet is honoured to invite you to contribute as an expert to the case-based eLearning programme within the ERKNet Curriculum for Rare Kidney Diseases. Please note that the cases are intended mainly for clinician trainees who are not yet specialized in rare kidney diseases. Before starting your work on the case, we kindly ask you to take a look at the instructions below and the sample case provided separately.

Guidelines to set up an eLearning case

- The case should be a **common case** (within the rare cases) – not an extremely unlikely and unique event
- Describe the case in a **progressive way**, with questions in-between
- Think before you design the clinical case → which message/skill should be delivered
- The case should include all necessary parameters and facts
    - **Clear** structure (sometimes a messy real-life case has to be smoothened)
    - **Simple** sentences, avoid excessive verbosity
    - Include **supportive** pictures, histological pictures, illustrations, sonography images, videos etc.
- We ask you to write up the case in a Word document (see Template).
- Each case should contain **10-15 questions** and/or free text and a final summary (max 4-5 bullet points), containing the main points and the take-home messages relevant to the topic.
- Both questions and text can be accompanied by media (image or video file). If you want to upload such files, please indicate the name of the media and send the file separately. You can also include hyperlinks

1. Build a case:

Vignette

- Age, gender (e.g. 5-year-old girl)
- Site of care (e.g. the emergency department)

- Presenting complaint (e.g. hematuria)
- Duration of complaint (e.g. 2 days)

- Patient history, including past medical history, family history, psychosocial history and review of systems if important and plausible for the scenario
- Physical findings
- Results of diagnostic studies
- Initial treatment, subsequent findings

2. How to formulate the "perfect question"

Questions should be placed to create a learn experience

Lead-in Question:

- The lead-in should be a **single, closed, clear** question. Ideally, after reading the vignette and the lead-in, a test-taker should be able to answer the item without seeing the options.
  "Which of the following is the next step in the management of this patient?"
  "Which of the following is the most likely diagnosis?"

Examples/options for good Lead-in questions

The Lead-in: Diagnosis

Which of the following factors in the patient's history most increased her risk for developing this condition?
Which of the following additional information regarding this patient's history is most appropriate to obtain at this time?
Which of the following is the most appropriate focus of the physical examination at this time?

Selecting and Interpreting Diagnostic Studies

Which of the following is the most appropriate diagnostic study to obtain at this time?
Which of the following laboratory studies is most likely to confirm the diagnosis?
Which of the following is the most likely explanation for these laboratory findings?
Arterial blood gas analysis is most likely to show which of the following sets of findings?

Formulating the Diagnosis

Which of the following is the most likely diagnosis?
Which of the following is the most likely working diagnosis?
Determining Prognosis/Outcome
Based on these findings, this patient is most likely to develop which of the following?
Which of the following is the most likely complication of this patient's current condition?

The Lead-in: Management

Which of the following immunizations should be administered at this time?
Which of the following is the most appropriate screening test?
Which of the following tests would have predicted these findings?
Which of the following is the most appropriate intervention?
For which of the following conditions is this patient at greatest risk?
Which of the following is most likely to have prevented this condition?

Which of the following is the most appropriate next step in management to prevent [morbidity/mortality/disability]?
Which of the following should be recommended to prevent disability from this patient's injury/condition?
Early treatment with which of the following is most likely to have prevented this patient's condition?
Supplementation with which of the following is most likely to have prevented this patient's condition?

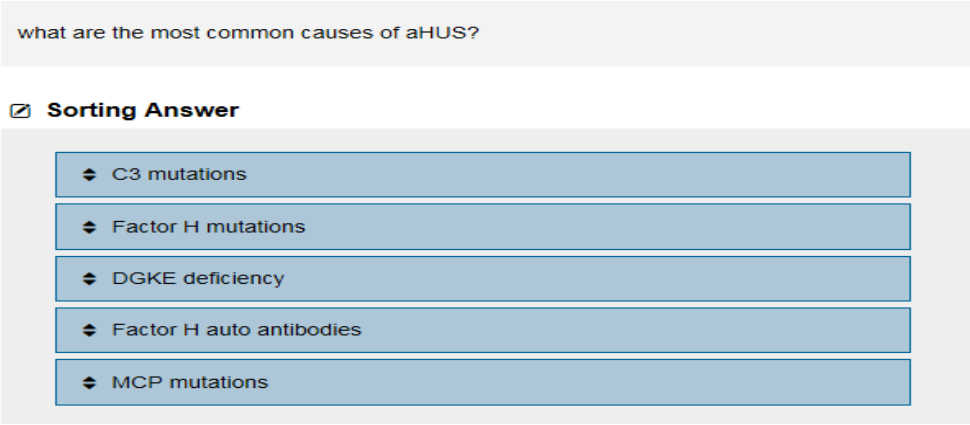
The lead-in: Mechanisms of Disease
Which of the following is the most likely explanation for these findings?
Which of the following is the most likely location of this patient's lesion?
Which of the following is the most likely pathogen?
Which of the following findings is most likely to be increased/decreased?
A biopsy specimen is most likely to show which of the following?

- **5 different question types** are available in the online platform.
- Each question must be followed by the **correct answer** and an **explanation by the Expert** why and which individual answers are correct or wrong.
- You do not have to use all question types; most issues can be covered by multiple-choice
- Feel free to apply the different question types according to your needs.

Types of questions:

1) Multiple-choice question with one or several correct answers:
The learner receives a feedback as to which answer(s) is/are correct, with an explanation by the expert.

2) Sorting question:
The learner is requested to order a list of items according to a certain criterion.



3) Lab values question:

The Expert indicates a list of laboratory values and the learner rates whether each value is (a) relevant to the disease in question and (b) expected to be elevated, decreased or normal.

which laboratory abnormalities do you expect in aHUS?

Lab values answer

A	✔	Potassium	elevated	elevated
B	✔	Hemoglobin	decreased	decreased
C	✖	Leukocytes	decreased	elevated
D	✔	Thrombocytes	decreased	decreased
E	✖	Haptoglobin	elevated	decreased
F	✔	Creatinine	elevated	elevated
G	✔	Urea	elevated	elevated
H	✖	Homocysteine	decreased	normal
I	✔	LDH	elevated	elevated
J	✔	Stool culture	normal	normal
K	✔	Shigatoxin stool PCR	normal	normal

Expert answers: Potassium, Hemoglobin, Leukocytes, Thrombocytes, Haptoglobin, Creatinine, Urea, Homocysteine, LDH, Stool culture, Shigatoxin stool PCR

4) Network/Matrix question:

In this question type two sets of variables are organized in tabular format and the learner is asked to assign a value to each combination. There is no limitation to the number of table rows and columns.

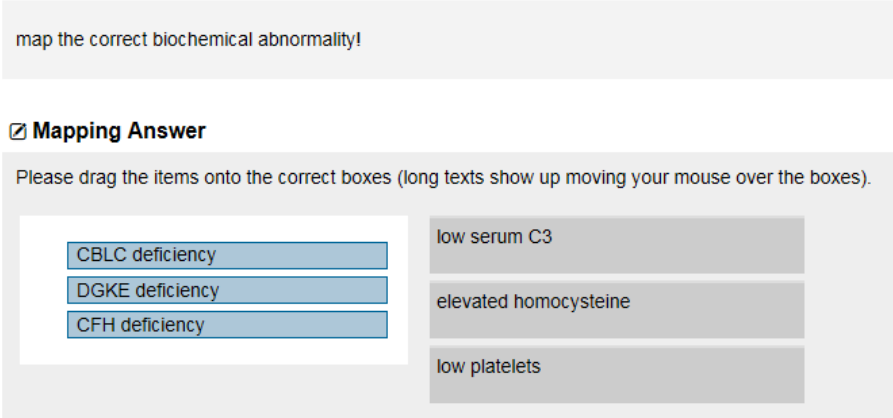
which etiologies differ in likelihood according to age?

Network/Matrix answer

Own Answer:	child	adult
genetic	+✖	+ +✖
auto antibody	?✖	+ +✔

5) Mapping question:

In this question type two sets of criteria are to be matched.



3. How to build Answers:

- Most important rule: all possible answers should be in the **same dimension** and **homogenous** (e.g. treatment options or diagnosis etc.).
- **Avoid vague** terms (such as “often” or “usually”) → leave space for interpretation.
- Do **not** use **absolute** terms such as “always” or “never”.
- Answers should **not** be **negatively phrased** (don’t use the word “except”).
- Numeric options should be in a **logical order.**
- The options should follow the **same grammatical form** of the stem.
- Options should be **short and clear**, avoid overly long or complicated answers
- Do not use “none of the above” as an option.
- Try to **avoid word repetition** from the question in the answer.
- Try to have the **same length** of all options.

4. Take home message

- Short conclusion