

Frequently Asked Questions

1) What is ERKReg?

The ERKnet Registry, also known as ERKReg, is a secure web-based application which has two major aims: (i) to identify contemporaneous cohorts of patients with rare renal disorders for clinical research across national borders, and (ii) to monitor treatment performance and patient outcomes in the participating centers. Moreover, the registry allows to integrate detailed disease-specific registries as extensions to the core database.

2) Who can see the data I enter in the registry? Are my data visible to the investigators of other Centers?

Access of authorized users to the registry is controlled by assignment of a secure, individualized password. A hierarchical access authorization system is implemented with super-administrator, administrator, sub-administrator (ERN thematic workpackage lead, Affiliated Registry lead), and center user levels.

The data entered will only be visible to the investigators of the Center and will not be shared with other users of the registry, except in aggregated format for benchmarking purposes. Sub-administrators are authorized download data excerpts from patients with the disease(s) of their interest.

3) Where are the data stored?

The data are stored on a commercial server in Germany, inaccessible to non-authorized personnel or entities. Regular back-ups are made. These back-ups are kept in a secured location. They guarantee the protection of (identifiable) data and the security of all information.

4) For how long will data be kept in the ERK-Reg database?

The data will be kept in the database for at least 15 years. Data will not be destroyed without permission of the user.

5) Can I download the data of my center?

The lead investigator of the center is authorized to download at any time all data of the patients tagged as participating in the Registry/Affiliated Registry and use these data without restrictions for analytical purposes.

6) Which browser is best to use ERK-Reg?

To maximize your experience with ERK-Reg, users are highly advised to use modern web-browsers. Recent versions of Google Chrome, Mozilla Firefox and Safari provide the best user experience. Microsoft Edge and Internet Explorer (11.0) support ERK-Reg.



7) How can I request access to ERK-Reg?

To be able to start, the first requirement for the user is to request a login. For this purpose, please send an e-mail request to:

- Tanja Wlodkowski (tanja.wlodkowski@med.uni-heidelberg.de)
- Giulia Bassanese (giulia.bassanese@med.uni-heidelberg.de)

8) How can I log in?

The application can be accessed through web-browsers. For best experience, make sure you are using a supported browser. ERK-Reg is supported to its full potentials on **Google Chrome, Mozilla Firefox and Safari**, preferably latest version. You can access the registry by the ERKNet page webpage by clicking on <https://www.erknet.org>

When you have an ERK-Reg login account (which can be used to access multiple ERKNet services), **enter username and the password provided** by the help desk member and click on the button "Login".

9) Is patient consent mandatory for enrolling patients in the ERK-Reg?

Yes, all patients must give at least a consent for data use in ERN registries and databases that will be recorded by ticking a checkbox indicating the minimum has been collected. The consent forms can be downloaded by clicking the "Download" and "Consent Forms" button located on the left side of the menu.

10) How can I enroll a patient into ERK-Reg?

In order to enroll a new patient from your center, please click on "Data entry".

11) How do I know the ID code of my patient?

The patient ID is automatically generated by the system after saving the data. You can see the patient-ID on the left of the menu. We recommend generating a local Excel document with the Name, Surname, date of birth, date of informed consent, together with the ERK-Reg patient ID. This key document should only be stored on a save hospital server and only be shared among the local users of the registry.



12) Do all ERK-Reg patients have to be registered in the sub-registries?

Participation in Affiliated Registries

Include patient also in dRTA Registry

Include patient also in italian Alport Registry **(under construction - do not check yet!)**

Include patient also in Childhood-onset SLE Registry **(under construction - do not check yet!)**

No, only patients with a rare kidney disease for which a sub-registry has been established can be entered into these affiliated registries by selecting the corresponding sub-registry in the basic data form. The Alport sub-registry is currently only available for Italian centers. Consent for registration in the affiliated registries must be indicated in the informed consent (see figure 17 of the ERK-Reg User Guide).

13) What date should I indicate in the box 'date of first signs or symptoms'?

Basic data

Sex

Date of birth (mm/yyyy)

Ethnicity

Date of first symptoms (mm/yyyy)
(leave field empty if unknown)

Date of first presentation to center (dd/mm/yyyy)

Sometimes the first symptoms of a rare kidney disease coincide with the first presentation at the hospital. Sometimes the first signs or symptoms of disease may appear long before the patient sees the doctor. For many of the CAKUT cases, the diagnosis can already be made before birth, as signs can be detected by ultrasound (e.g. enlarged kidneys, dilated urinary tract, oligohydramnios). In these cases, the date of the prenatal ultrasound should be enter. If the date of first signs/symptoms is not specified in the medical records, we ask the user to carefully read patients' medical history and assess when the symptoms started. If it is not possible to trace the date, please leave the box blank.

14) How can I choose the “primary renal diagnosis”?

Before registering a patient, we recommend checking the “Renal Orphacode list” (available in Downloads menu). The list contains all the kidney diseases in the registry in order to clarify the user which diseases can be entered and which not. In the data entry menu, the “Primary renal diagnosis” can be chosen through 4 different searchbars:

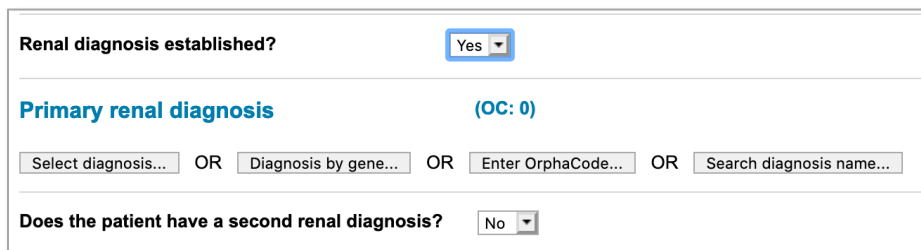
- “*Select diagnosis*”: the search is made along the Orphanet diagnosis tree, choosing in hierarchical order the disease groups down to the entity of choice.

- *“Diagnosis by gene”*: Type in the search bar the name of the mutated gene that caused the disease. The disease(s) associated with the gene will pop up.
- *“Enter ORPHA code”*: Type the Orphanet disease code in the search bar.
- *“Search diagnosis name”*: Enter at least the first 4 letters of the disease name into the search bar.

15) What should I do when the renal diagnosis of a patient has not been established yet?

If the kidney diagnosis has not been established, mark "no" in the respective field of the basic entry menu. You can come back and change this entry and at additional information at any time once the renal diagnosis has been established.

16) How do I know which is the primary and which is the secondary renal diagnosis?



The screenshot shows a form with the following fields:

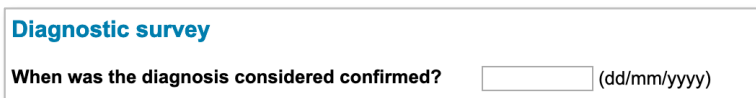
- Renal diagnosis established?** with a dropdown menu set to "Yes".
- Primary renal diagnosis** with a count of "(OC: 0)".
- Four search options: "Select diagnosis...", "Diagnosis by gene...", "Enter OrphaCode...", and "Search diagnosis name...", separated by "OR" labels.
- Does the patient have a second renal diagnosis?** with a dropdown menu set to "No".

If two renal diagnoses are recorded, the one that is more relevant to the clinical course of the patient should be chosen as the primary diagnosis. E.g., when there is bilateral kidney dysplasia, causing impaired kidney function, and high-grade reflux, kidney dysplasia should be chosen as primary and VUR as secondary diagnosis.

If one of the diagnoses has been confirmed by genetic testing, this diagnosis should usually be chosen as primary diagnosis.

In case it is still unclear which is the main diagnosis, please consult with the physician in charge for clarification.

17) How do I know when the diagnosis was confirmed?



The screenshot shows a form with the following field:

- Diagnostic survey**
- When was the diagnosis considered confirmed?** with a text input field and the format "(dd/mm/yyyy)".

This depends on the type of disease. When a genetic diagnosis has been made, the date when the result was obtained should usually be chosen as the date of diagnosis confirmation.

If genetic studies were not done or negative, the date of kidney biopsy should be entered for glomerulopathies and the date of the first imaging study demonstrating the diagnosis (e.g. ultrasound, cystourethrography) for CAKUT and ciliopathy cases including ADPKD.

For some metabolic nephropathies, the diagnosis can be made unambiguously by biochemical examinations (e.g. hyperoxaluria, cystinuria).

In these cases, the first recorded abnormal lab results mark the confirmation of the diagnosis, even if further confirmation was obtained later by genetic testing. It is always advisable to ask the physician in charge for support in case of doubt.

18) How do I know how the diagnosis was established?

Diagnostic survey

When was the diagnosis considered confirmed? (dd/mm/yyyy)

How was the diagnosis established?
(Tick all that apply)

(1) Please check even if results negative or pending

- Clinical history
- Positive family history
- Clinical examination
- Biochemical evaluation
- Immunological evaluation
- Hematological evaluation
- Imaging
- Kidney biopsy
- Skin biopsy
- Genetic screening (1)
- Other methodologies

Several items are asked in the 'Diagnostic Survey' section of the basic data entry menu. **Please check all that apply.** In the following we list typical features for each category.

Clinical history: In many rare kidney diseases the patients report signs and symptoms that are characteristic of their disease, such as poor hearing in Alport syndrome, intermittent macrohematuria in IgA nephropathy, petechiae in HUS, or cheek erythema in systemic lupus erythematosus. Please check 'Clinical history' if such signs and symptoms were reported.

Positive family history: Please check this field if other family members have been diagnosed with the same disease or a not further specified chronic kidney disease.

Clinical examination often supports the diagnosis of a kidney disease but in itself is usually not sufficient to make a definite diagnosis. Typical clinical findings relate to abnormalities of fluid balance (edema, dehydration), height and weight, blood pressure, appearance of the skin (e.g. facial erythema, petechiae, café au lait spots), impaired hearing or vision, and limb abnormalities (e.g. hexadactyly). Please check 'Clinical examination' button if such findings were made at the initial examination.

Biochemical evaluation should be checked if a typical biochemical abnormality in blood and/or urine has pointed to a certain diagnosis (e.g. altered potassium, magnesium, calcium, bicarbonate in tubulopathies; high LDH in HUS, etc.).

Abnormal kidney retention parameters (increased serum creatinine, cystatin C, urea, phosphorus) should only cause checking the 'biochemical evaluation' button if the kidney disease was discovered by chance upon a routine check of serum biochemistry, without any other signs of symptoms of disease. Abnormal findings regarding complement proteins and auto-antibodies should not be considered under 'biochemical' but under 'Immunological' evaluation.

Hematological evaluation refers to the blood count, i.e. hemoglobin, leukocytes, platelets etc. Please check this field only if a hematological abnormality helped identifying the underlying kidney disease. E.g., thrombocytopenia (low platelet count) and microangiopathic hemolytic anemia (low hemoglobin) are essential to diagnose hemolytic-uremic syndrome; low platelets can be present in SLE, etc.

Immunological blood tests are performed to detect autoimmune disorders. We are asking about different panels of immunological markers for different diseases. You can download and consult the list



of immunological markers checked in ERKReg to confirm individual diagnoses. The file can be found in "useful documents".

Imaging: Diagnostic imaging describes various techniques of viewing the inside of the body to help figure out the causes of an illness and confirm a diagnosis. For example, Fetal Posterior Urethral Valves (PUV) are usually detected in a fetus during pregnancy by ultrasound or MRI.

A **kidney biopsy** is mostly important in the differential diagnosis of glomerulopathies, and sometimes in thrombotic microangiopathies.

A **skin biopsy** is sometimes used to confirm diseases affecting the kidneys and the skin (e.g. IgA vasculitis).

Genetic screening is a type of medical test that identifies changes in chromosomes, genes, or proteins. The results of a genetic test can confirm or rule out a suspected genetic condition or help determine a person's chance of developing or passing on a genetic disorder. **If you do not have yet the results of this test, please click on "pending". You will have the opportunity to enter the results any time!!!**

19) How should I choose between the different methods of genetic diagnostics?

Genetic diagnostics for primary renal diagnosis

Date of screening
(leave field empty if unknown) (dd/mm/yyyy)

Was a causative gene abnormality identified? Yes No

Receipt date of genetic results (dd/mm/yyyy)

Please fill in the fields above and save first. Genetic data depends on the diagnosis.

Methods

Individual gene testing
 NGS gene panel screening
 Exome sequencing

Further comments on genetics

There are different methods to perform a genetic test.

Individual gene testing: Single gene testing is performed to identify changes or variants in a single gene. This method is usually applied when a disease is suspected clinically which is caused by abnormalities in a single gene.

NGS panel screening: Next generation sequencing gene panels screen a group of genes that can cause a group of kidney disorders.

Exome sequencing: Exome sequencing, also known as whole exome sequencing (WES), is a genomic technique for sequencing the protein-coding regions (exons) of all genes in the genome. This screening method is usually applied when the investigator has no idea which gene could be affected.

20) How do I choose the date of the "initial visit"?

The date of the initial visit of a registry patient may coincide with the date of the signature of the informed consent but cannot be more than one month prior to the date of the informed consent.

21) How do I know when the next visit is due?

The date of the next visit to be documented is indicated in the patient dashboard.

22) Why is "next visit due" highlighted in different colors?

The statement "next visit due" can be highlighted in different colors depending on the status of the registration. Green means that the patient has been correctly saved in the system. Yellow means that the patient has been saved correctly but needs to be updated or has missing data. Red means that the initial visit of the patient has not been entered yet.

23) What "ID number" should I indicate in the informed consent?

This space must be completed with the automatically generated system patient ID once the patient has been successfully registered.

24) How can I contact the IT support?

In case you have any technical difficulty logging into the ERK-Reg or using any of its functions, please contact the support team via email tanja.wlodkowski@med.uni-heidelberg.de. Please send your feedback, suggestions, or complaints to the support team.

