

# Assessment of plasma conductivity in Korean hemodialysis (HD) patients in relation to sodium and fluid status

<b>Submission date</b>	<b>Recruitment status</b>	<input type="checkbox"/> Prospectively registered
27/05/2013	No longer recruiting	<input type="checkbox"/> Protocol
<b>Registration date</b>	<b>Overall study status</b>	<input type="checkbox"/> Statistical analysis plan
05/06/2013	Completed	<input type="checkbox"/> Results
<b>Last Edited</b>	<b>Condition category</b>	<input type="checkbox"/> Individual participant data
23/06/2017	Urological and Genital Diseases	<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Hemodialysis is the process where a dialysis machine is used to purify the blood of a person whose kidneys are not working normally. The aim of this study is to gather information from Korean hemodialysis patients on how the change in plasma conductivity during dialysis relates to the patient's fluid gain up to the next dialysis session. Plasma conductivity is measured by the dialysis machine and reflects the presence of ions, mainly sodium and potassium. The study also looks at the relationship between plasma conductivity and the measured plasma sodium and potassium levels.

### Who can participate?

Patients aged 18 or older with end-stage kidney disease undergoing hemodialysis

### What does the study involve?

Participants follow their usual dialysis schedule during the study, and all the treatment parameters are unaffected by the study. Data is collected over 12 ordinary dialysis sessions, including plasma conductivity and body weight. There are no extra visits besides the usual dialysis treatments.

### What are the possible benefits and risks of participating?

The expected benefits for the patient are small. However, the increased awareness of changes in plasma conductivity and plasma sodium in response to the prescribed dialysis fluid sodium level may lead to a more personalized sodium prescription by dialysis. The foreseeable risks of participating in this study are small and do not differ from those usually observed during hemodialysis treatment.

### Where is the study run from?

1. Samsung Medical Center (South Korea)
2. Kangbuk Samsung Medical Center (South Korea)
3. Catholic University of Korea Incheon St. Mary's Hospital (South Korea)
4. Kangwon National University Hospital (South Korea)

5. Konkuk University Chungju Hospital (South Korea)
6. Catholic University of Korea, Daejeon St. Mary's Hospital (South Korea)
7. Hallym University Kangnam Sacred Heart Hospital (South Korea)
8. Inje University Sanggye Baik Hospital) (South Korea)

When is the study starting and how long is it expected to run for?

January 2013 to June 2013

Who is funding the study?  
Gambro Korea Ltd (South Korea)

Who is the main contact?  
Jungmin Im  
jungmin.im@gambro.com

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr YoonGoo Kim

**Contact details**  
Samsung Medical Center  
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Korea, South  
135-710

## Additional identifiers

**Protocol serial number**  
1503

## Study information

**Scientific Title**  
Assessment of plasma conductivity in Korean hemodialysis (HD) patients in relation to sodium and fluid status: a prospective, open-label, multicenter study

**Study objectives**  
To demonstrate in prevalent Korean anuric dialysis patients that the change in plasma conductivity during dialysis, as measured by the Diascan tool, is related to the weight gain during the following interdialytic period (inter-dialytic weight gain).

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**

1. Samsung Medical Center IRB, 07/02/2013, ref: SMC2012-12-099-001
2. Kangbuk Samsung Medical Center IRB, 12/02/2013, ref: KBC13020D
3. Catholic Univ. St'Mary Incheon Hospital IRB, 04/04/2013, ref: CIRB-00060\_2-014
4. Kangwon National Univ. Hospital IRB, 05/02/2013, ref: KWNUH2013-01-003-001
5. Konkuk Univ. Chungju Hospital IRB, 19/02/2013, ref: 2013-005
6. Catholic Univ. St'Mary Daejeon hospital IRB, 04/04/2013, ref: CIRB-00060\_2-013
7. Hallym University Kangnam Sacred Heart Hospital IRB, 28/02/2013, ref: 2013-01-11(701)
8. Inje University Sanggye Baik Hospital IRB, 13/02/2013, ref: SPIRB-13-009

### **Study design**

Prospective open-label multicenter study

### **Primary study design**

Observational

### **Study type(s)**

Treatment

### **Health condition(s) or problem(s) studied**

End stage renal disease (ESRD)

### **Interventions**

The patient will be on his/her ordinary dialysis schedule during the study period, and treatment parameters like session length, blood flow rate, dialyzer type and size, anticoagulation strategy, and ultrafiltration (UF) volume will be prescribed in the ordinary manner unaffected by the study. The subjects prescribed dialysis fluid composition should preferably be kept unchanged during the study period.

In addition to the enrollment visit, patient and treatment data collection will be done in conjunction with 12 ordinary dialysis sessions. There are no extra visits besides the usual dialysis treatments.

Total Duration of study treatment : 6 weeks per patient

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome(s)**

1. Initial and final plasma conductivity, as displayed by the Diascan monitoring tool, recorded in all mid-week dialysis sessions during the 6 week study period
2. Body weight post-dialysis for all mid-week dialysis sessions and pre-dialysis for all subsequent dialysis sessions during the 6 week study period

### **Key secondary outcome(s)**

1. Initial and final plasma conductivity levels during the dialysis session
2. Plasma sodium levels pre- and post-dialysis
3. Plasma osmolarity level pre- and post-dialysis
4. Intradialytic change in plasma sodium

5. Dialysis fluid to plasma sodium gradient at start of dialysis
6. Body weight pre and post dialysis and pre dialysis at the following dialysis session
7. Need for saline infusion (isotonic saline or hypertonic solution) during the dialysis session
8. Recording of potential safety events

**Completion date**

30/06/2013

## Eligibility

**Key inclusion criteria**

1. End stage renal disease (ESRD)
2. Male and female aged 18 or older
3. Treated in HD or HemoDiaFiltration (HDF) mode three times per week since at least 3 months
4. On stable dialysis prescription since at least 1 month (without major changes in dry weight, dialysis fluid conductivity/sodium level, dialyzer type, blood flow rate)
5. Available for treatment with Gambro dialysis machines equipped with the Diascan monitoring tool
6. Signed consent to participate in the study (informed consent)

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Key exclusion criteria**

1. 24 hour urine volume production estimated to be >100 ml
2. Dialysis prescribed with varying dialysate sodium level (sodium profiling)
3. Considered unable to respond to thirst by free fluid intake
4. Regularly prescribed infusion of Na-containing fluids during or between dialysis session (e.g. saline to manage intradialytic hypotension)
5. Regularly prescribed infusion of albumin solution, e.g. to manage hypoalbuminemia or intradialytic hypotension
6. Pregnancy or planned pregnancy
7. Known hyperproteinemia or hyperlipidemia

**Date of first enrolment**

29/01/2013

**Date of final enrolment**

30/06/2013

## Locations

### Countries of recruitment

Korea, South

### Study participating centre

Samsung Medical Center

Seoul

Korea, South

135-710

## Sponsor information

### Organisation

Gambro Korea Ltd. (Korea, South)

### ROR

<https://ror.org/00y1hj465>

## Funder(s)

### Funder type

Industry

### Funder Name

Gambro Korea Ltd (Korea, South)

## Results and Publications

### Individual participant data (IPD) sharing plan

### IPD sharing plan summary

Not provided at time of registration

### Study outputs

Output type

Details

Date created Date added Peer reviewed? Patient-facing?

Participant information sheet

