

# Extending the boundaries: donor selection in living donor kidney transplantation

Living Kidney Donation Network Meeting  
24 January 2019

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Transplant Nephrologist

# What is risk?

*noun*

A situation involving exposure to danger

# Short term

General anaesthesia

Any surgery

- Pain
- Nausea
- Infection
- Thrombosis
- Paraesthesia

Nephrectomy

- Vascular injury
- Bowel injury
- Splenic injury
- Thoracic injury

## Medium term



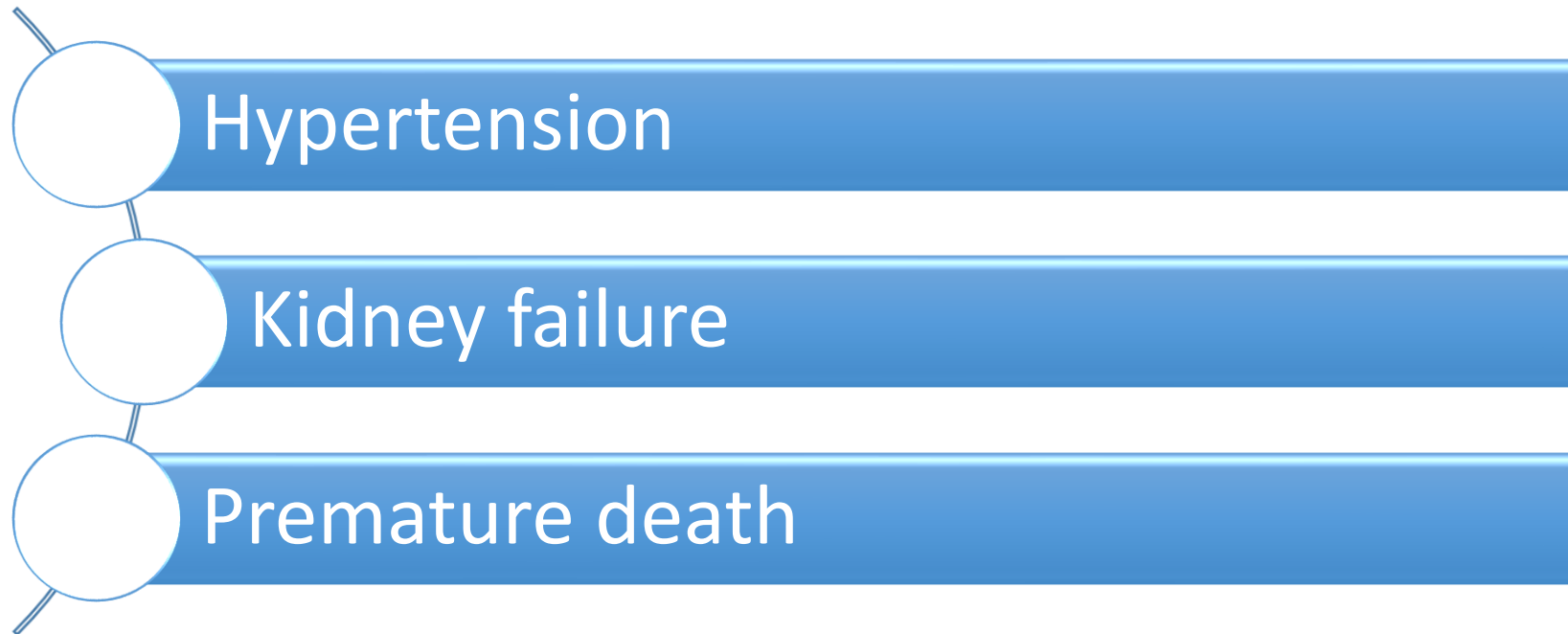
Pain

Hernia

Testicular discomfort

Irritable bowel

## Long term



## Suitability:

1. For general anaesthesia / surgery
2. To be left with a single kidney
3. Of kidney for transplant into recipient

# Case 1

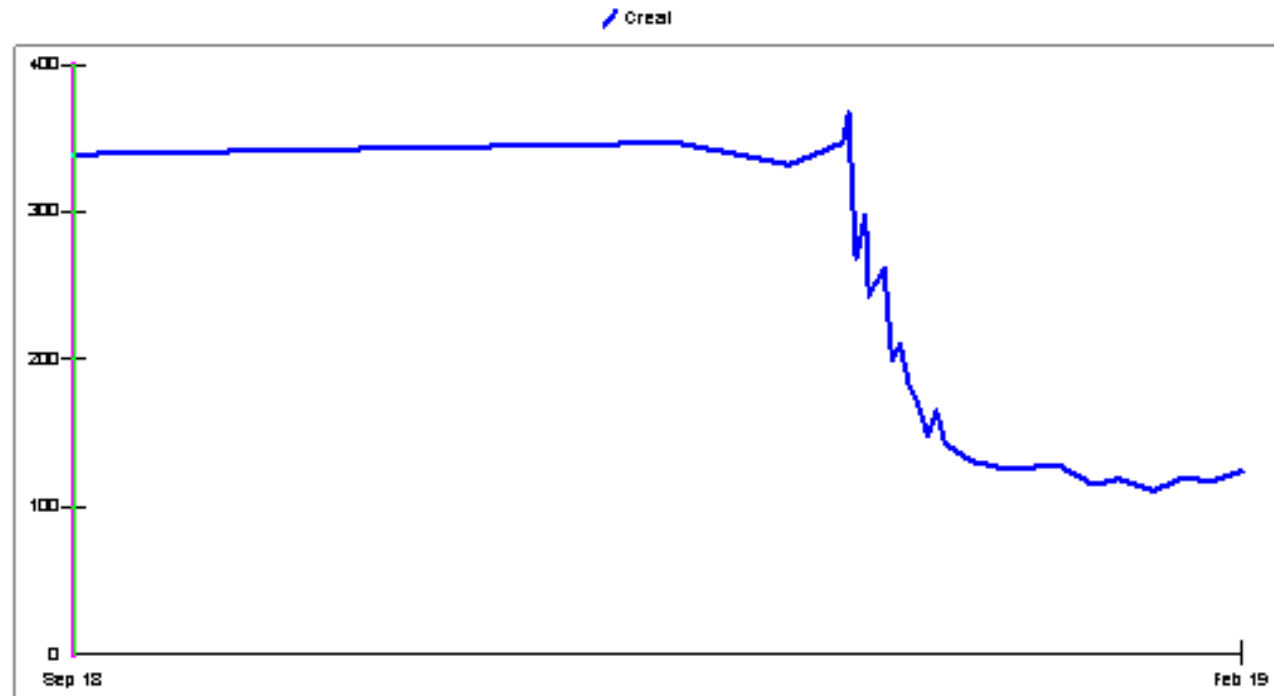
## Donor

- 81 yr. sister
- “I consider I am very fit for my, admittedly advanced, age”
- PMHx: amoxicillin in 2012 for chest infection
- Creatinine 69

## Recipient

- 78 yr. man
- IgA nephropathy (biopsy 34 years ago)
- Nephrectomy for RCC (10 years ago)
- eGFR 15, decline by 4 ml/min/yr.

# Outcome





## Case 2

### Donor

- 65 yr. male
- Paroxysmal AF, TKR
- Propafenone, Aspirin, statin

### CT

L kidney 2.5 mm stone  
R kidney stones x3  
3mm, 2mm, 3mm

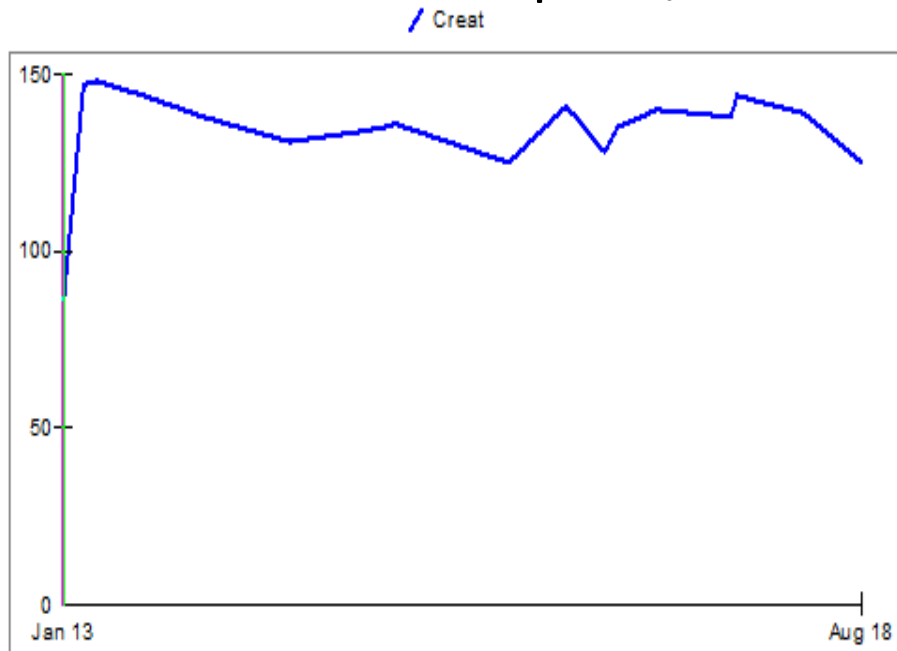
### Recipient

- 30 yr. son
- ESRD aged 4 yr.
- 2 previous transplants
  - First from mother
- Back on HD 4 years
- Chronic schizophrenia

# Outcome

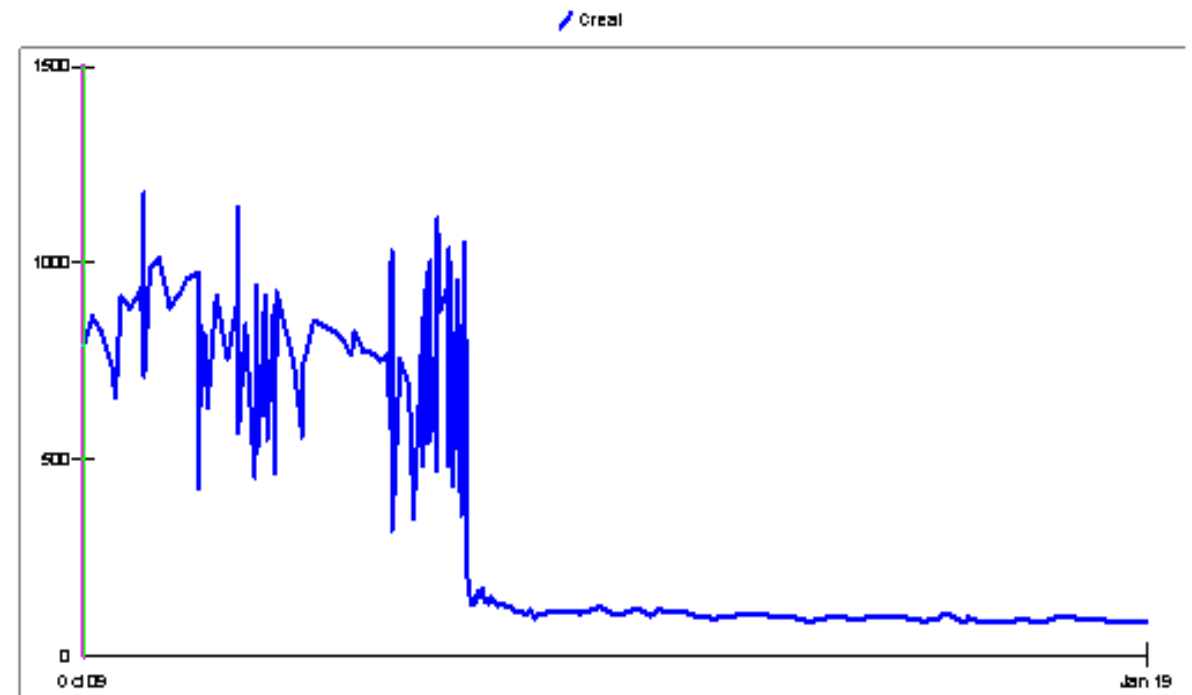
## Donor

- Donated L kidney Jan 13
- Ureteroscopy & laser Apr 13
- Creatinine 125  $\mu\text{mol/l}$



## Recipient

- 26 yr. old female in KSS
- Creatinine 89  $\mu\text{mol/l}$



## Case 3

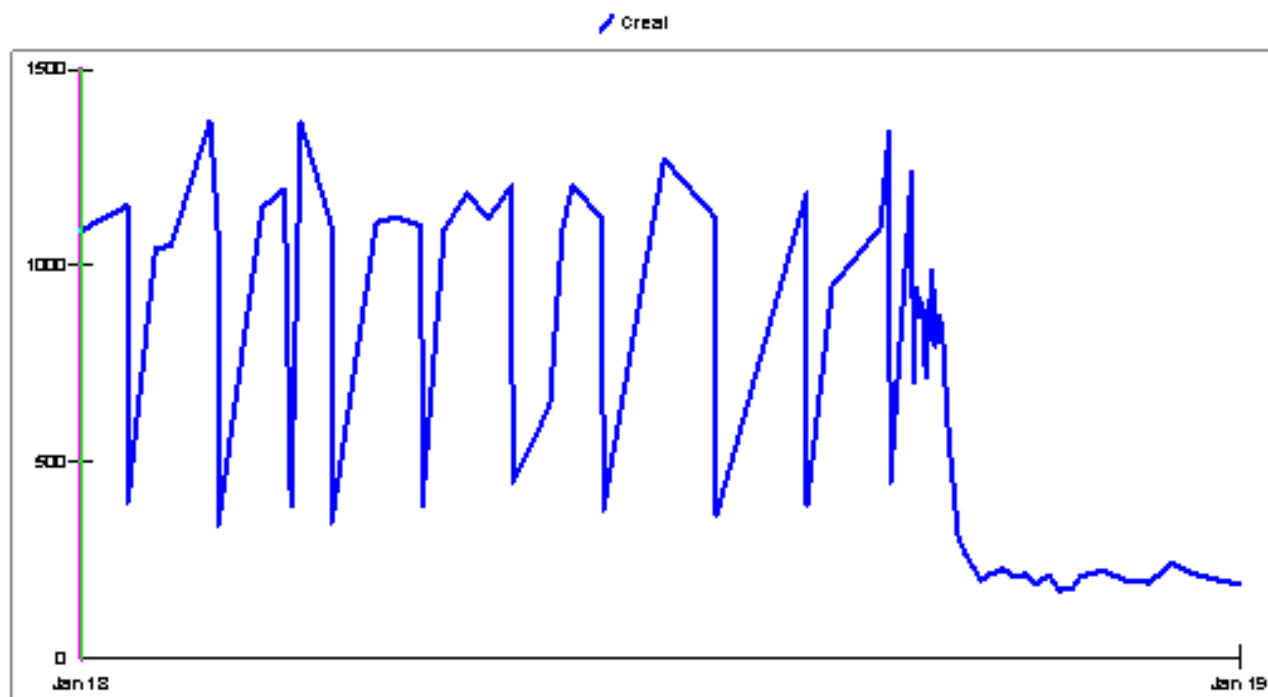
### Donor

- 36 yr. man with no PMHx
  - Father T2 DM (mid-50s)
  - Sister IGT, paternal relatives T2 DM
  - Sedentary lifestyle
  - Lost 1.5 stone before assessment
  - Currently 101kg, BMI 32
- 
- ❖ Fasting glucose 6.7 mmol/l
  - ❖ HbA1c 43 mmol/l

### Recipient

- 40 yr. wife
  - HD for last 7 years, access issues
  - Three previous transplants
  - Highly sensitised
- 
- Cross-match negative

# Outcome



## Case 4

### Donor

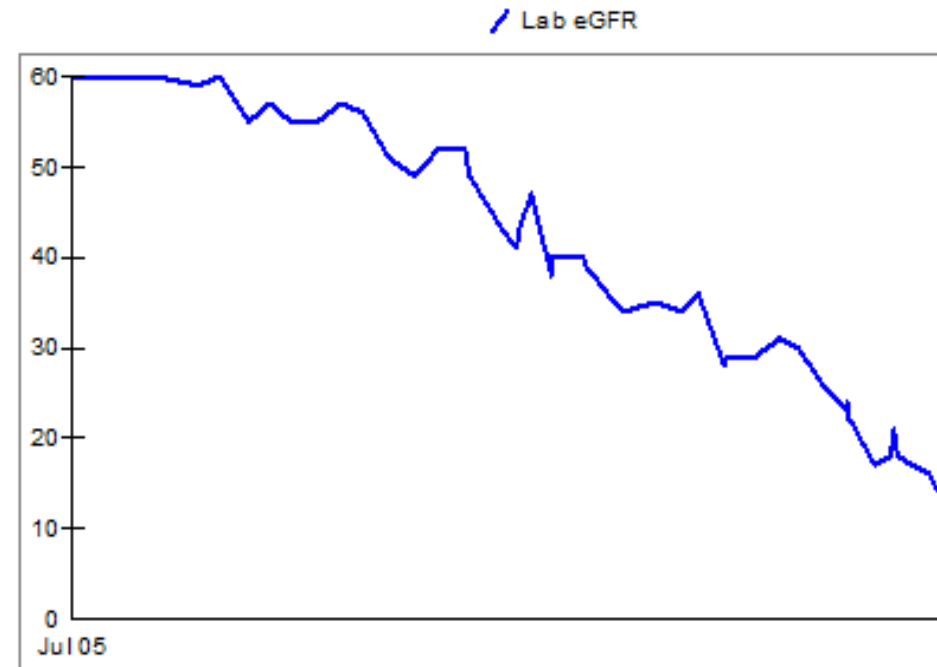
- 56 yr. father 000
- 54 yr. mother 100
- 50 yr. uncle 100

### Father

- atrial fibrillation on warfarin
- early Parkinson's disease

### Recipient

- 24 yr. old



The lower portion of the cava is continuous with a reasonably good calibre right common iliac vein, this drains the right leg via the obturator vein and internal iliac on the right side, the external iliac is occluded.

The left iliac venous system appears essentially entirely occluded apart from the obturator and a portion of the internal iliac which drains via a large presacral collateral to the right internal iliac.

RIGHT

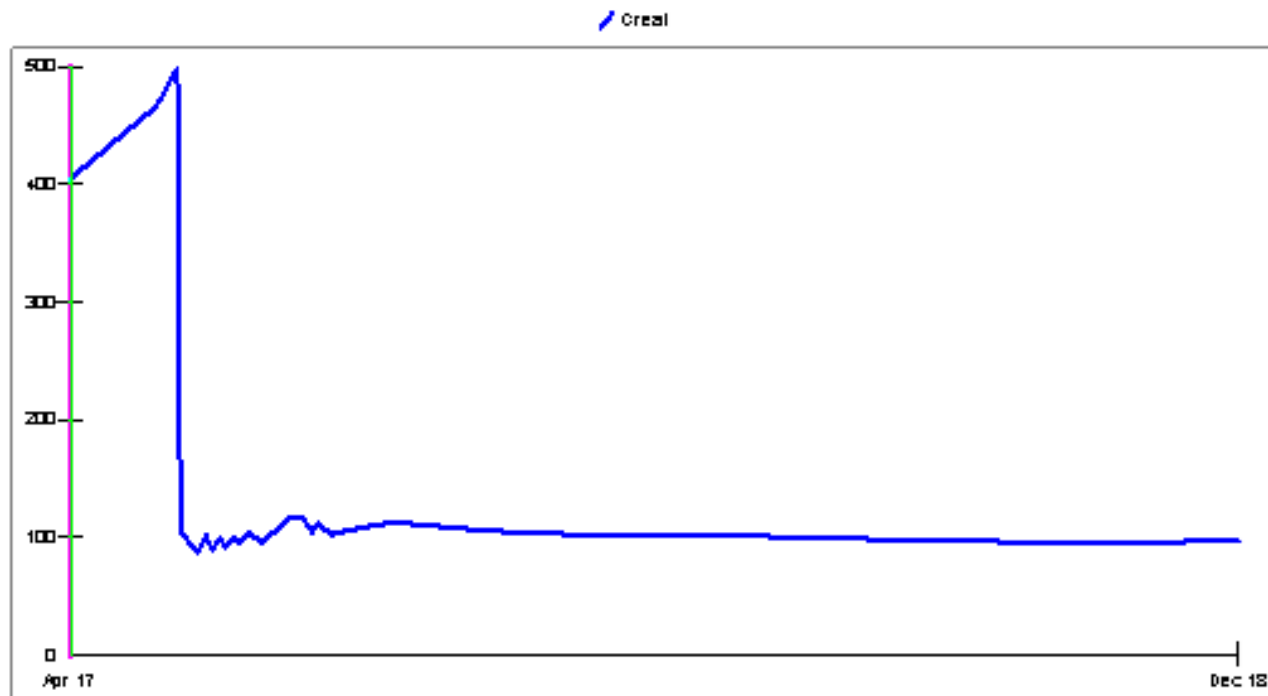
SUPINE

LEFT

SUPINE



# Outcome





## Case 5

### Donor

- 73 yr. female
- IBS – fully investigated
- Non-visible haematuria
- Height 156cm, weight 49kgs
- Creatinine 63  $\mu\text{mol/l}$
- EDTA GFR 53 ml/min
- Trace of blood on urinalysis

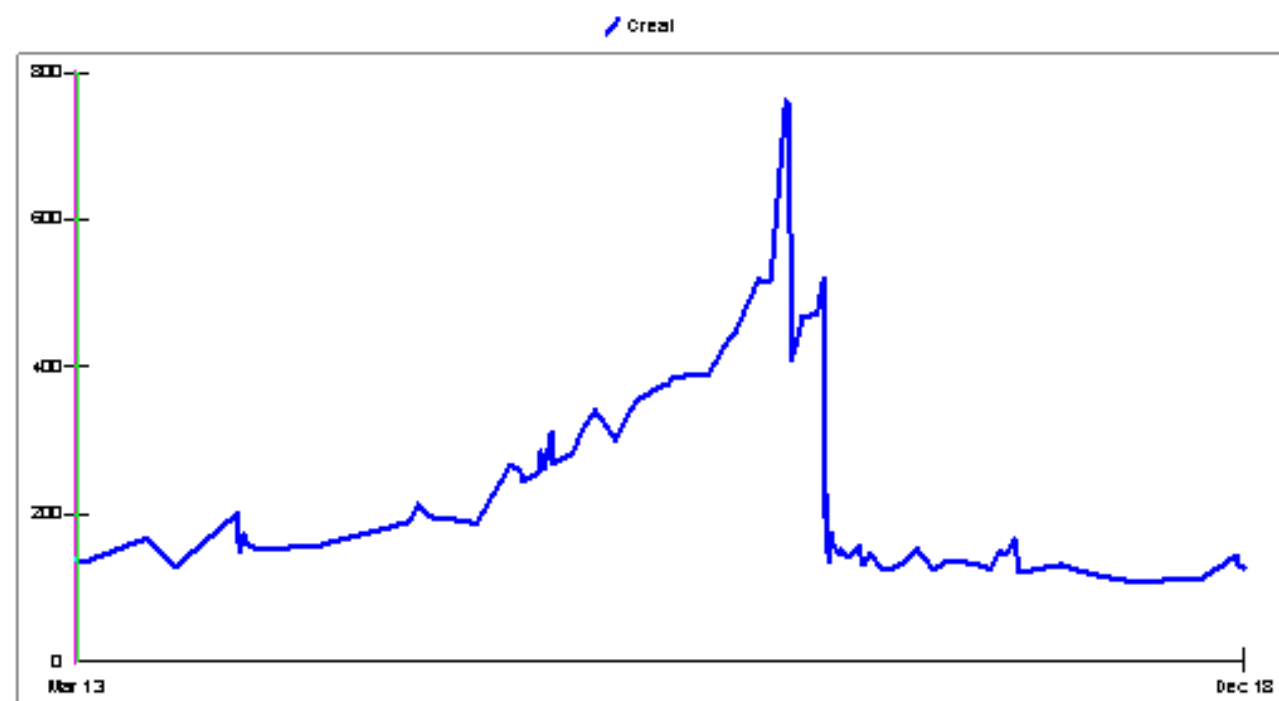
### Recipient

- 74 yr. partner/friend
- IgA nephropathy
- Complete heart block
- AF
- Bronchiectasis
- eGFR 12 ml/min/1.73m<sup>2</sup>
- Height 180cm, weight 103kg

**Donor**

**Recipient**

- 66 yr. female in KSS



## Case 6

### Donor

- 45 yr. father
- epilepsy

Blood group incompatible

Left kidney      2 cysts

### Recipient

- 23 yr. old
- Renal dysplasia
- First Tx aged 14 yr. (2009)
  - Rejection
  - Pregnancy
- Dialysis 2015



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Res



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Guide

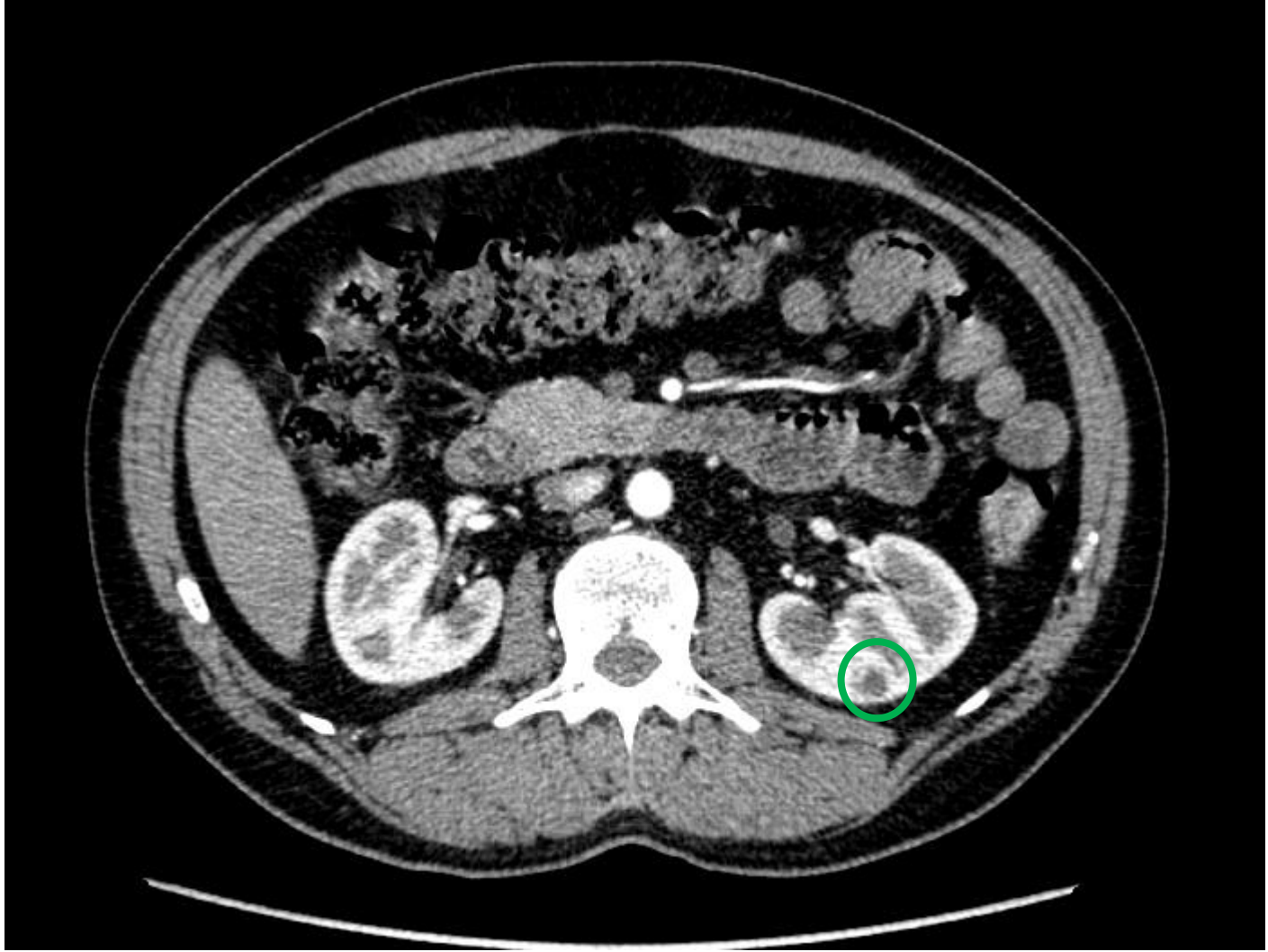


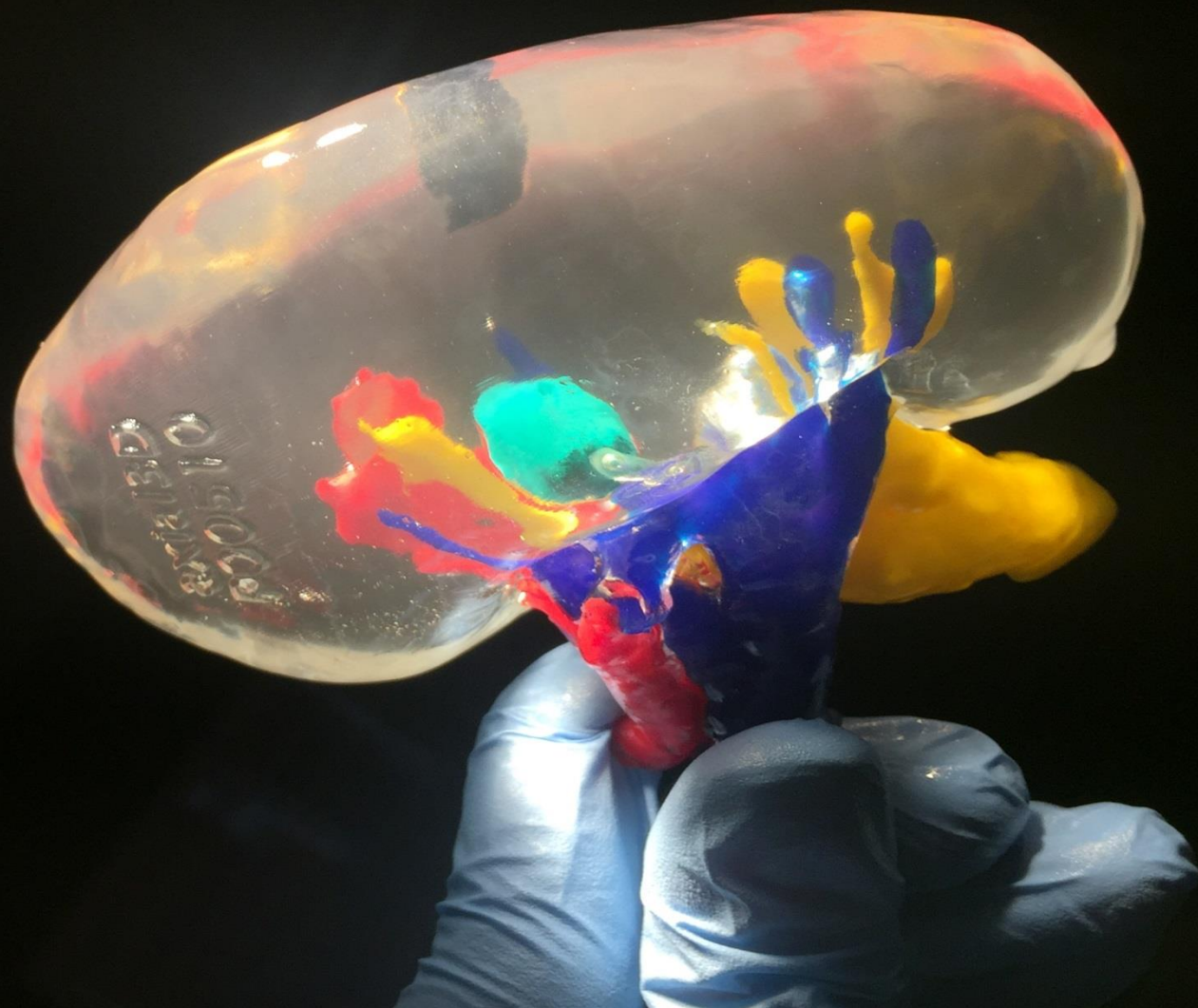
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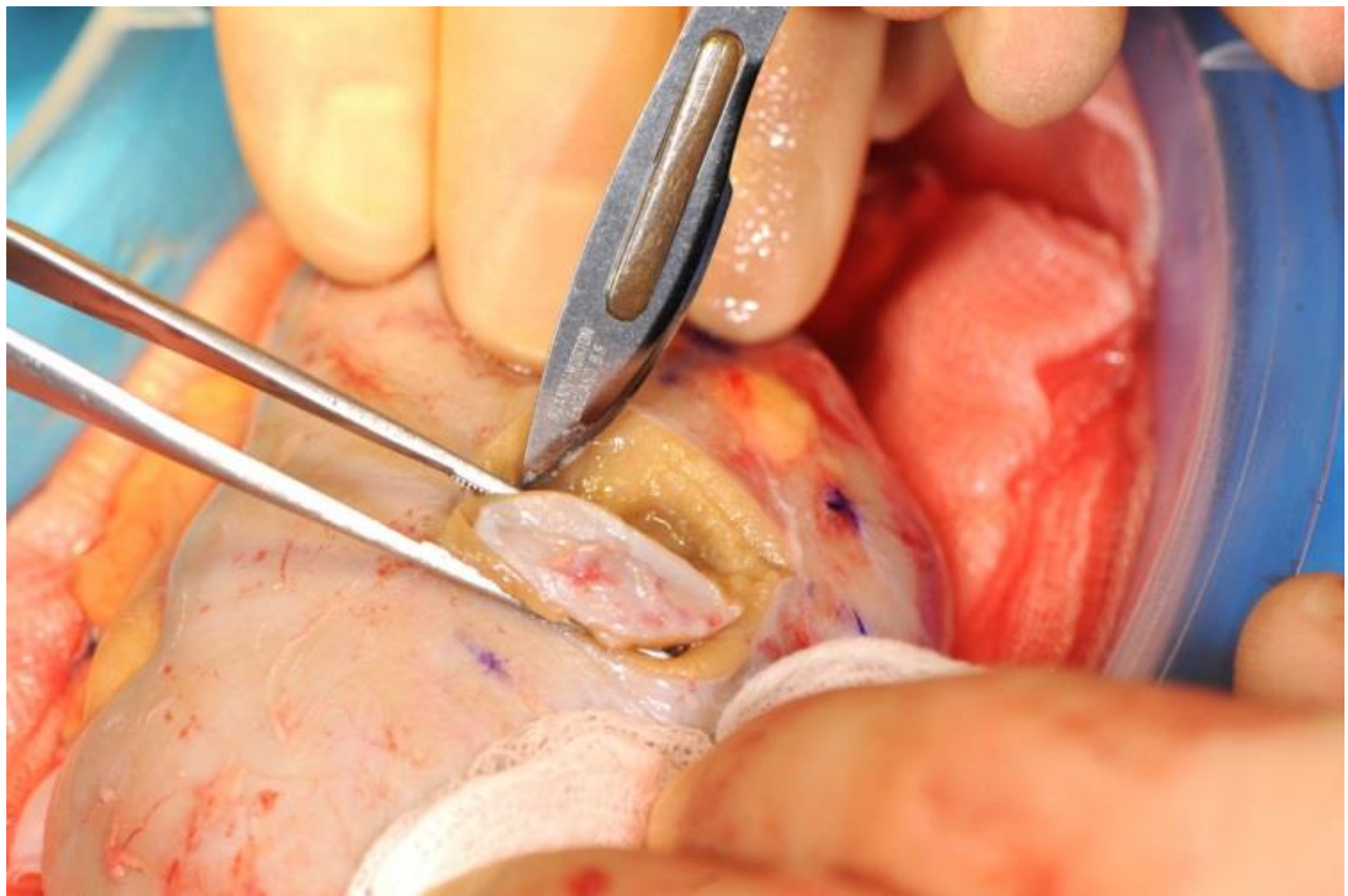
Dual

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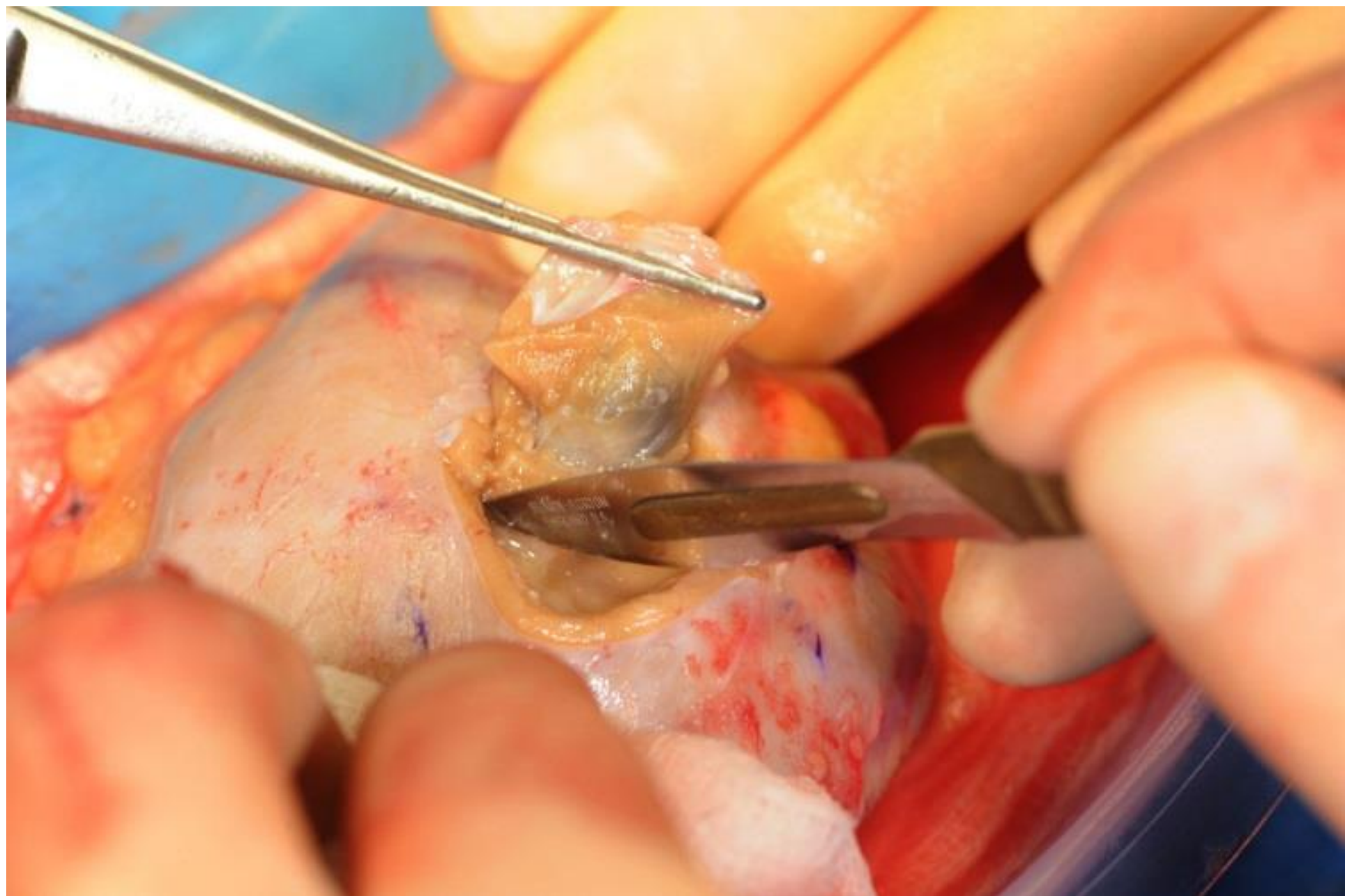








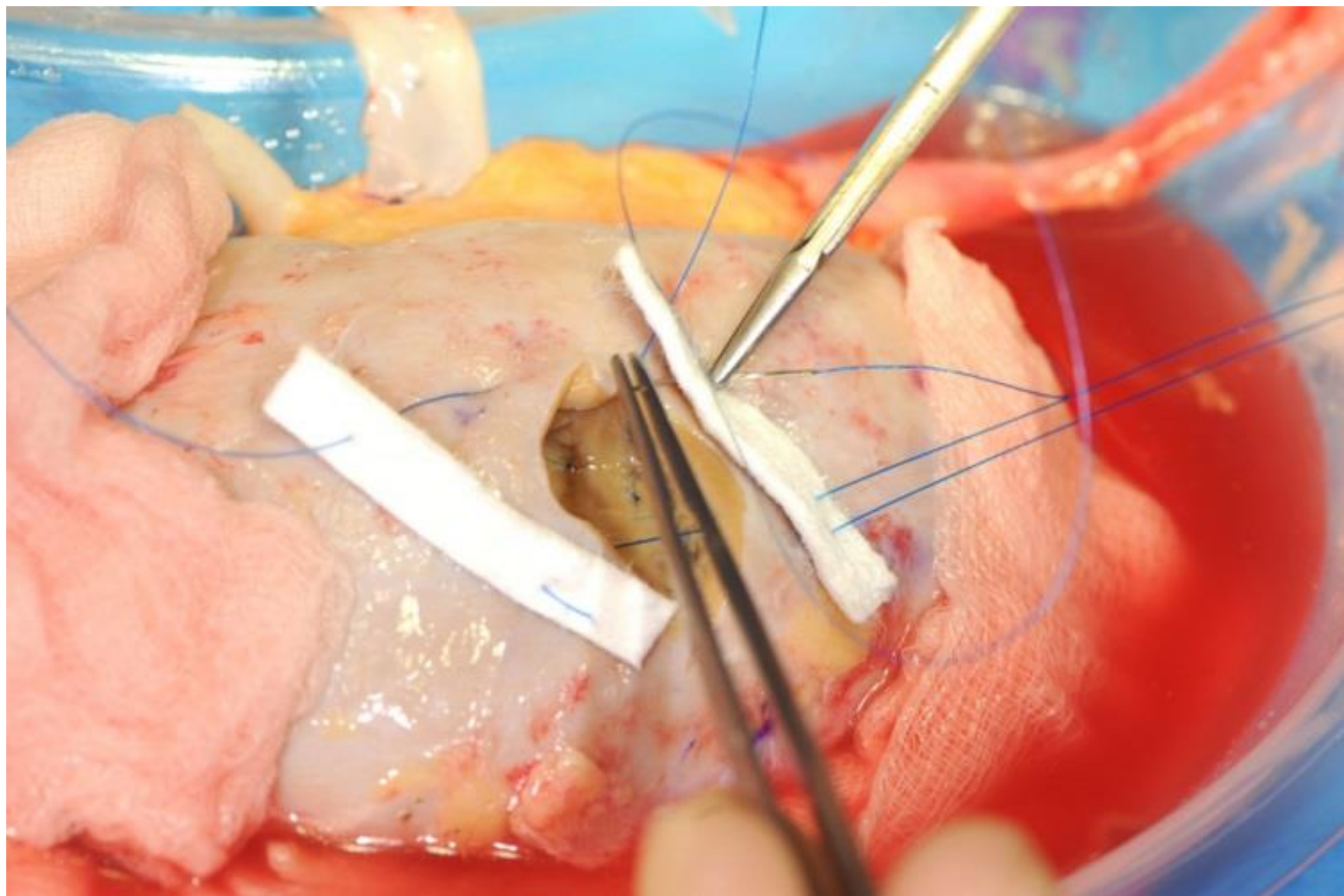




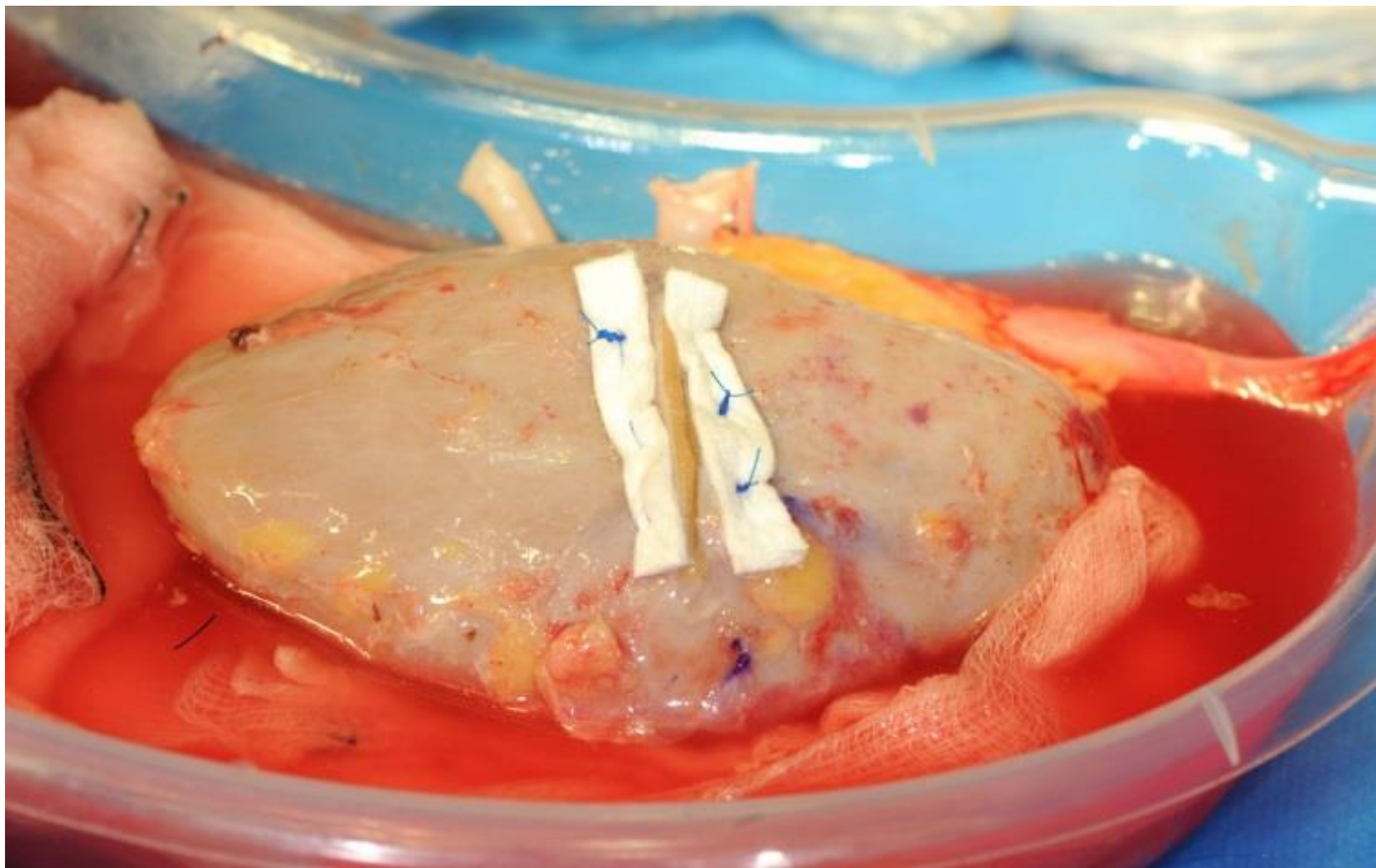






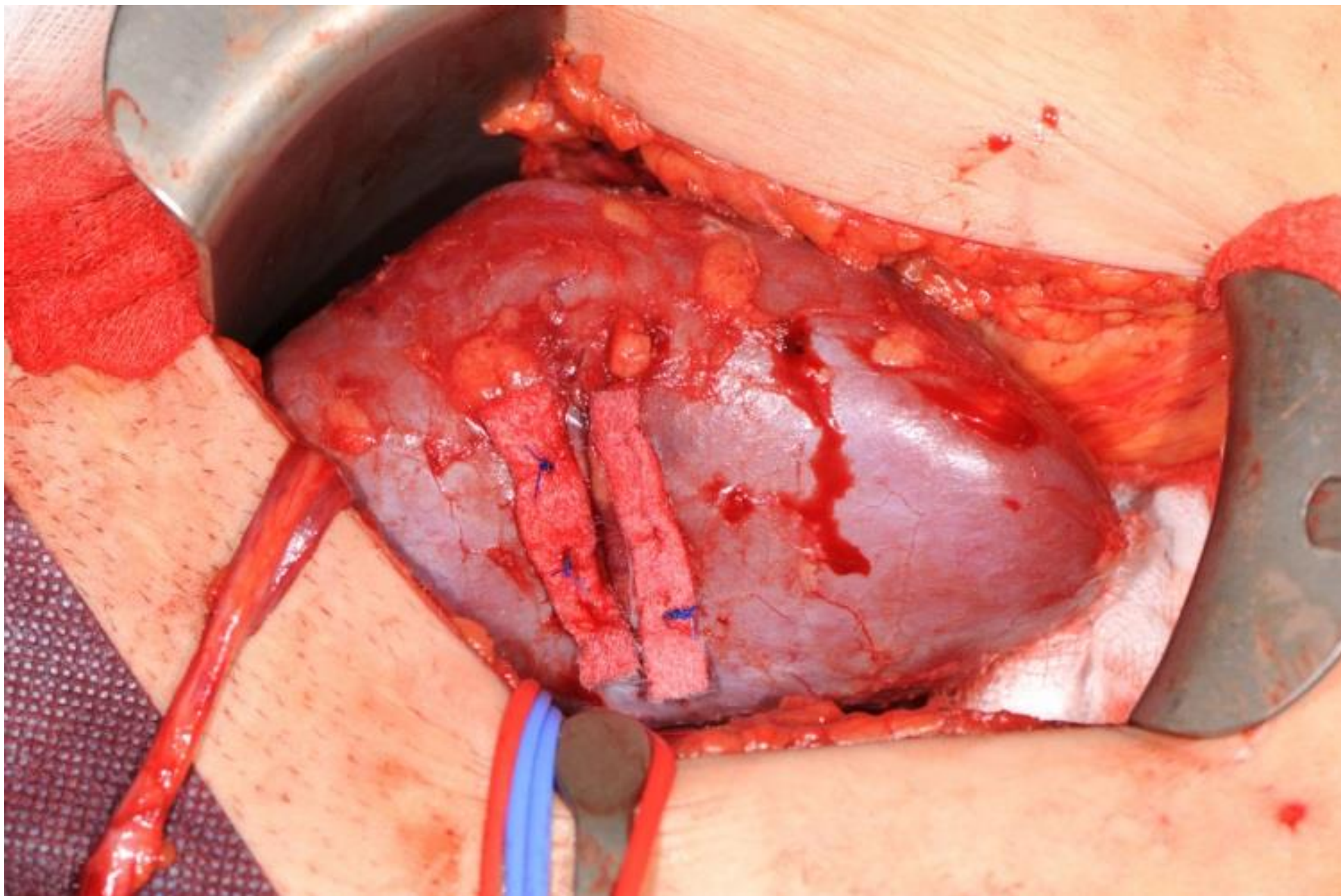




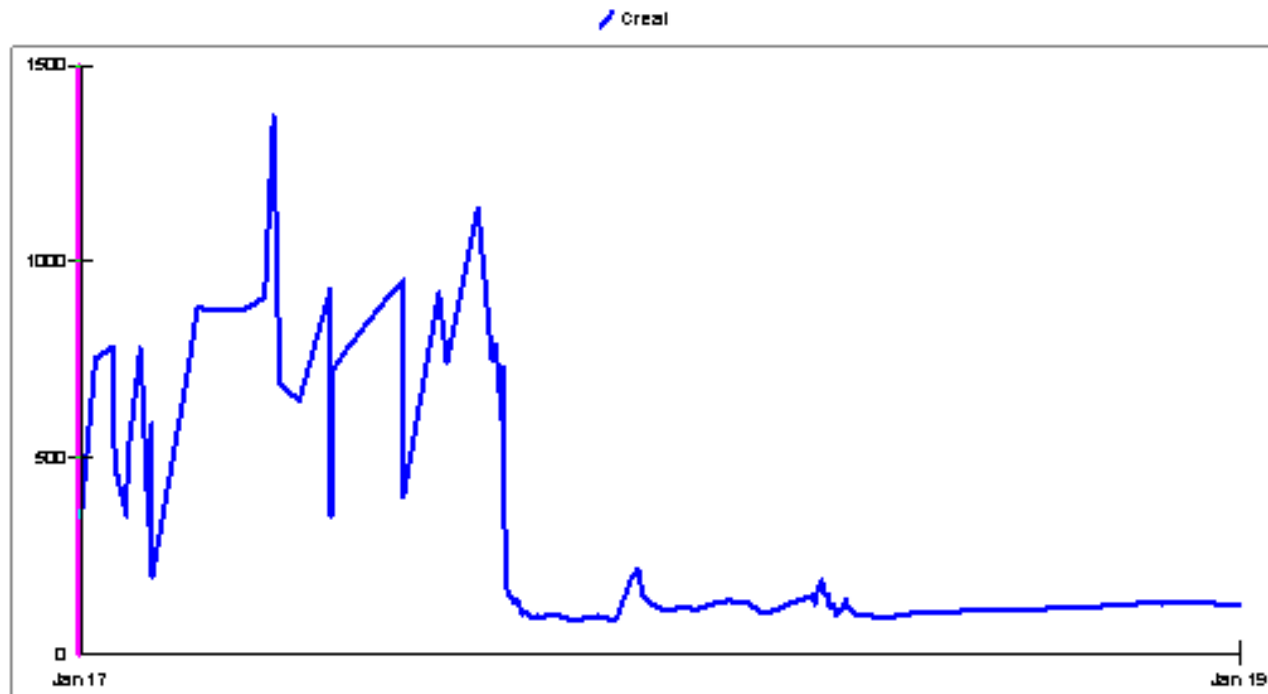








# Outcome











# Conclusion

- Living donor transplantation is associated with the best chance of being alive in the medium and long-term
- Risk cannot be eliminated
- Who determines what risk is acceptable?

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OC1

Results Enquiry

14/01/2016

Dept. : BS BHSCT Blood Sciences

Spm: 14 Jan 2016 06:00

Spm No:

Pat No:

Laboratory alert – 12 hour post-transplant specimen

14. Tests	Result	Units	Flags and Ref. Ranges	Status
Amy	LabCentre - LABORATORY COMMENTS			P
Cal	Laboratory Comment		Item	P
Pho	1. PLEASE NOTE: Significant changes have occurred for some results. Patient details on specimen have been checked. Suggest repeat specimen if no clinical explanation for change.			P
ALP				P
Alb				P
Adj				P
C R				P
Glu				P
T.B				P
AST				P
GGT				P
ALT				P
Magnesium	0.91	mmol/L	(0.7 - 1)	P
vSodium	140	mmol/L	(135 - 145)	P

Accept

Cancel

A\_

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CAPS

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