



History and Fact

## Definition

### preemptive

1 先制の、先取権のある。2 【網】先制の。3 【トランプ】(セイ (bid) の) 先制の  
(株式会社研究社 新英和・新英中辞典)

↓

Pre-emptive (preemptive)  
renal, kidney transplantation

PET, PRT, PKT, PEKT

先行的腎移植、維持透析を経ないでの移植

## 腎代償療法の一つに過ぎません

Journal of the American Society of Nephrology  
Dr. Joseph E. Murray (1911-2012): A life of curiosity, humanism, and achievement  
Volume 23  
January 2012  
Volume 13, Issue 1  
Pages 1-241

KTx: 1954.12.23

KTx: 1956.5

Bonney Lee Hunter (Wenner)  
June 10, 1921-December 27, 2010

KTx: April 26, 1959-April 4, 2011; The World's Longest Surviving Transplant Recipient

第5回 集中セミナー

2013.7.14

## KRT in Japan

The diagram illustrates the hierarchy of kidney replacement therapy options in Japan:

- ESKD** (End-Stage Kidney Disease) is at the top center.
- HD** (Hemodialysis) is on the left, connected by a double-headed arrow to ESKD.
- PD** (Peritoneal Dialysis) is on the right, connected by a double-headed arrow to ESKD.
- PEKT** (Peritoneal Exchange Kidney Transplant) is shown below HD and PD, connected by a downward arrow from ESKD.
- KTX** (Kidney Transplant) is at the bottom center, connected by a downward arrow from PEXT.

Arrows indicate the flow from ESKD to the various treatment paths. The KTX path is highlighted with a thick black arrow.

第5回 集中セミナー

2013.7.14

1st Paper of PEKT

Dates: 1989; Rev: 2013-03-01  
The 1989 report of the North American Pediatric Renal Transplant Cooperative Study.  
Kasner D, Ataya GG, Bell LM, Carter S, Eriksen M, Gader L, Juvonen A, Knechtle H, McEwan J, Neiva JJ, et al.  
Source  
Cancer Compendium Cancer Registry, NC, USA  
Abstract  
This report of the North American Pediatric Transplant Cooperative Study summarizes data contributed by 157 participating centers on 754 children with 761 transplants from 1 January 1980 to 16 February 1989. Data collection was initiated in October 1987 and follow-up of all patients is ongoing. Transplant frequency increased with age. 20% of the patients were less than 3 years, with 7% being under 2 years. Common frequent diagnoses were: aplastic/hypoplastic kidneys (18%), obstructive uropathy (16%), and focal segmental glomerulonephritis (12%). Preemptive transplant, i.e., transplantation without prior maintenance therapy, was performed in 21% of the patients. Diabetic nondiabetics pretransplant were peritoneal dialysis in 42%, and hemodialysis in 20%. Dialysis nephropathy was reported in 29%. Live donor sources accounted for 42% of the transplants. Among cadaveric donors, 41% of the donors were under 11 years old. During the first post-transplant month, maintenance therapy was used similarly for live-donor and cadaver source transplants, with prednisone, cyclosporine, and azathioprine used in 83%, 83%, and 87%, respectively. Triple therapy with prednisone, cyclosporine, and azathioprine was used in 70%, 70%, and 78% of functioning cadaver source transplants at 6 months, 12 months, and 18 months as opposed to 60%, 62%, and 64% for live-donor transplants, with single-drug therapy being uncommon. Hypotension during months 1-6 occurred in 52% of the patients, with treatment of rejection and infection being the main causes. Additionally, 19% were hospitalized for hypertension. During months 6-12 and 12-18, 30% and 28% of the patients with functioning grafts were hospitalized. Times-to-first-rejection differed significantly for cadaver and live-donor transplants. The median time to the first rejection was 26 days for cadaver transplants and 196 days for live-donor transplants. Overall, 57% of treated rejections were completely reversible although the complete reversal rate decreased to 27% for four or more rejections. One hundred and fifty-two graft failures had occurred at the time of writing, with a 1 year graft survival estimate of 0.90 for live-donor and 0.71 for cadaver source transplants. In addition to donor source, recipient age is a significant prognostic factor for graft survival. Among cadaver donors, decreasing donor age is associated with a decreasing probability of graft survival. Thirty-five deaths have occurred, 16 attributed to infection and 19 to other causes. The current 1-year survival estimate is 0.94. There have been 4 malignancies.

第5回集中教育セミナー  
2013.7.14

1st Paper of PEKT

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Kasner D, Ataya GG, Bell LM, Carter S, Eriksen M, Gader L, Juvonen A, Knechtle H, McEwan J, Neiva JJ, et al.  
Source  
Cancer Compendium Cancer Registry, NC, USA  
  
**ONAPRTCS**  
**OPEKT definition**  
**O754Pts/756KTx**  
**OPEKT; 21%**  
  
2013.7.14

Transplantation, 1981 Feb;31(2):321-4.  
Preemptive transplantation—an analysis of benefits and hazards in 85 cases.  
Katz MH, Karmazyn M, Gruenbaum S, Grapel J, Cozzi S, Lewis RH, Van Buskirk CT, Rubin BD.  
Source:  
Department of Surgery, University of Texas Medical School, Houston, TX 77030.

## Abstract

The benefit of transplantation without prior dialysis might be counterbalanced by the failure to develop possible immunologic mechanisms associated with chronic uremia and dialysis. This study compares graft and patient outcome, cyclosporine toxicity, pharmacokinetics, rejection episodes, nutritional status, and social and vocational rehabilitation between a preemptive group of 85 patients transplanted without prior dialysis and a cohort of 94 hemodynamically, temporally and disease-matched recipients of renal transplants after a minimum of 6 months' chronic dialysis therapy. The groups were matched for donor type, gender, and age, as well as immunologic risk factors of HLA mismatch and percent panel-reactive antibody. All patients received CsA and prednisone immunosuppression. There were only two differences between the cohorts. The preemptive group included more diabetic patients, 30 versus 18 (P less than 0.01). The control cohort included more recipients who had received any posttransplant transfusion, 55 versus 26 (P less than 0.001). Both of these factors of having any impacts would be expected to reduce graft survival in the preemptive group. All patients in the study had a minimum follow-up of 1 year and over half of the recipients are beyond 40 months. The preemptive patients showed survival rates of 94, 80, and 81 percent at 1, 2, and 5 years. These rates were not significantly different from those of the control group, namely 90, 86, and 83 percent, respectively. The actuarial graft survival rates in the preemptive group of 83, 81, 76, 73, and 70 percent at 1, 2, 3, 4, and 5 years were not substantially different from the control group rates, namely 80, 81, 79, 77, and 76 percent. Preoperative blood transfusion or percent positive panel-reactive antibodies had no effect on postoperative outcome in either group. The incidence of CsA nephrotoxicity was 5.4 percent in the preemptive group, which was not statistically different from the 17.8 percent in the control group. The incidence of rejection episodes in the absence of patient noncompliance was comparable between the groups. Seven of the unavoidable rejection episodes in the preemptive group were due to noncompliance, compared with none in the control group ( $P$  less than 0.001). Preemptive recipients were also more likely than control group patients to be employed full-time both before transplantation (38 vs. 22,  $P$  less than 0.05) as well as after transplantation (38 vs. 26,  $P$  less than 0.02).

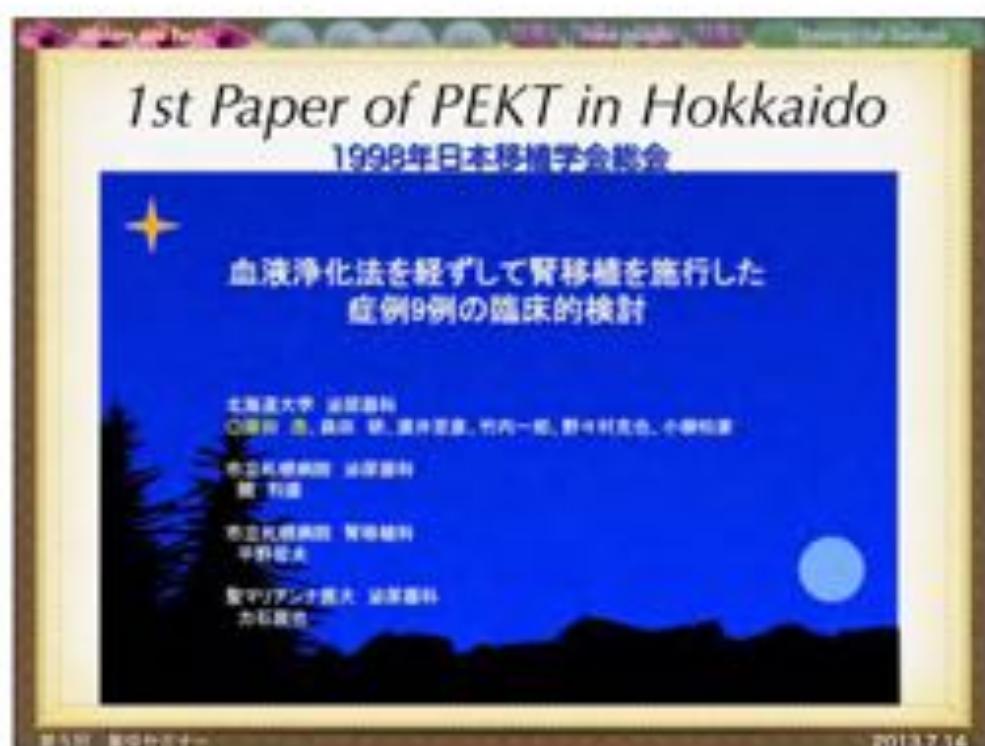
第5回集中教育セミナー 2013.7.14

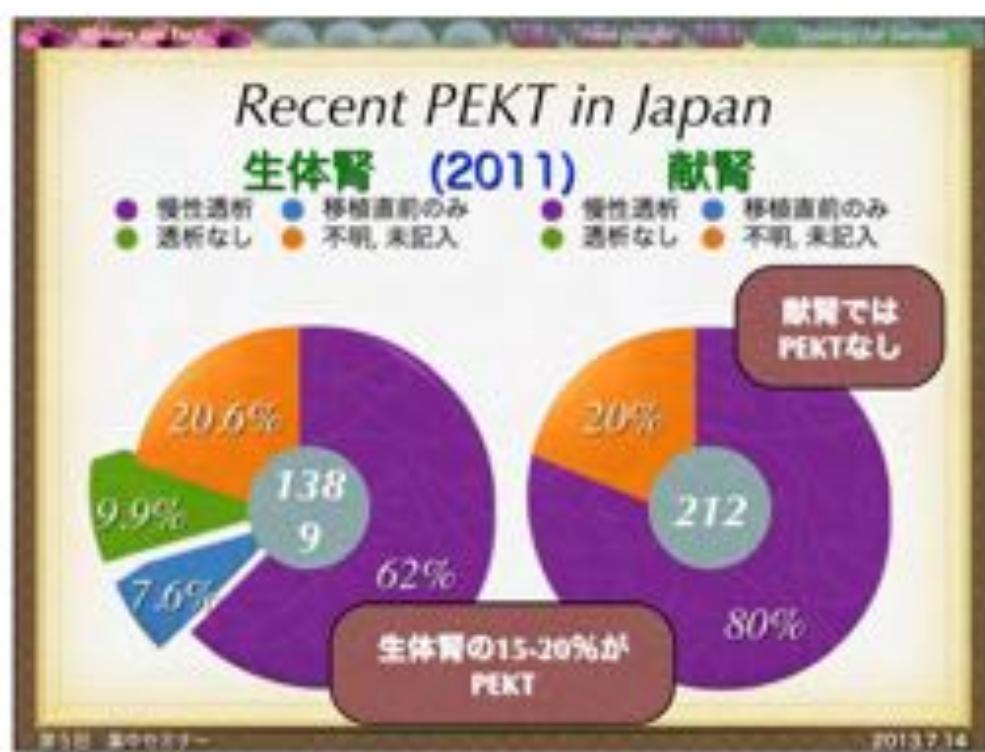
Transplantation, 1981 Feb;31(2):321-4.  
Preemptive transplantation—an analysis of benefits and hazards in 85 cases.  
Katz MH, Karmazyn M, Gruenbaum S, Grapel J, Cozzi S, Lewis RH, Van Buskirk CT, Rubin BD.  
Source:  
Department of Surgery, University of Texas Medical School, Houston, TX 77030.

## 2nd Paper of PEKT

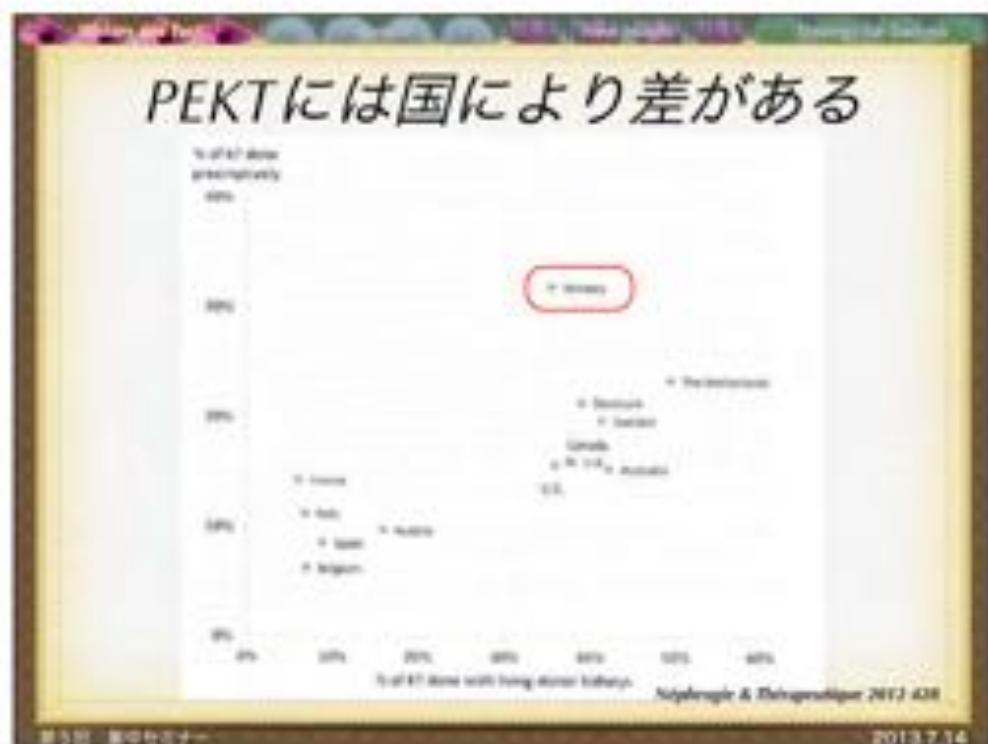
- PEKT 85/non-PEKT
- PEKT; DMNx↑, PreTx Transfusion↓
- CsA tox, GS, PS; Comparable
- PEKT/AR due to Drug NAT↑
- PEKT/Full time employment↑

第5回集中教育セミナー 2013.7.14

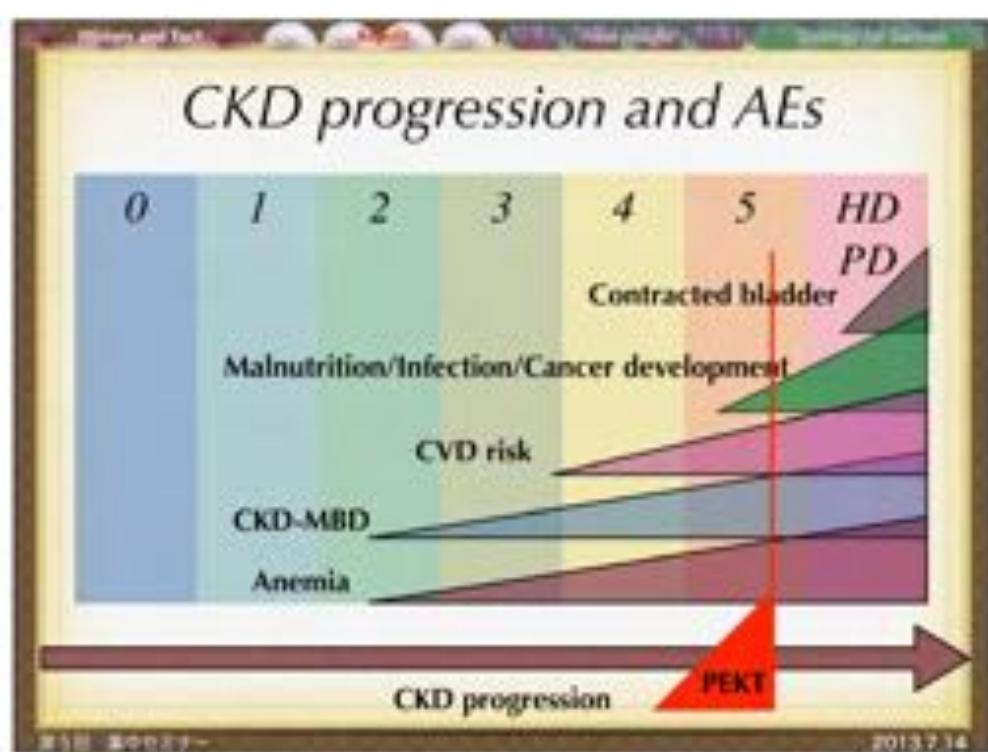


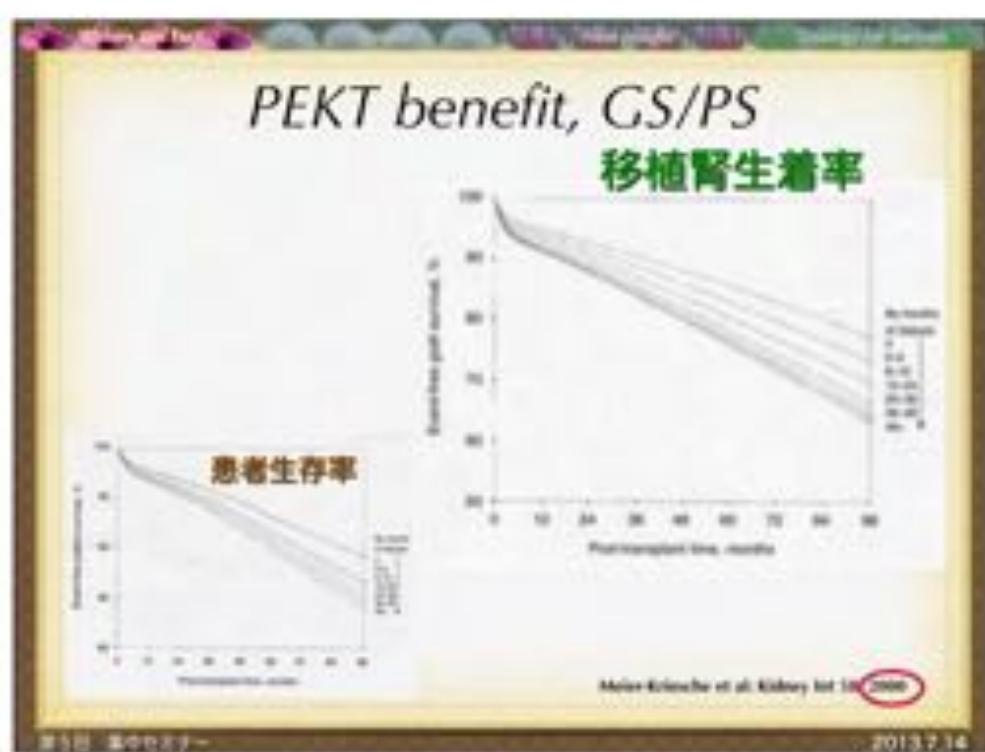
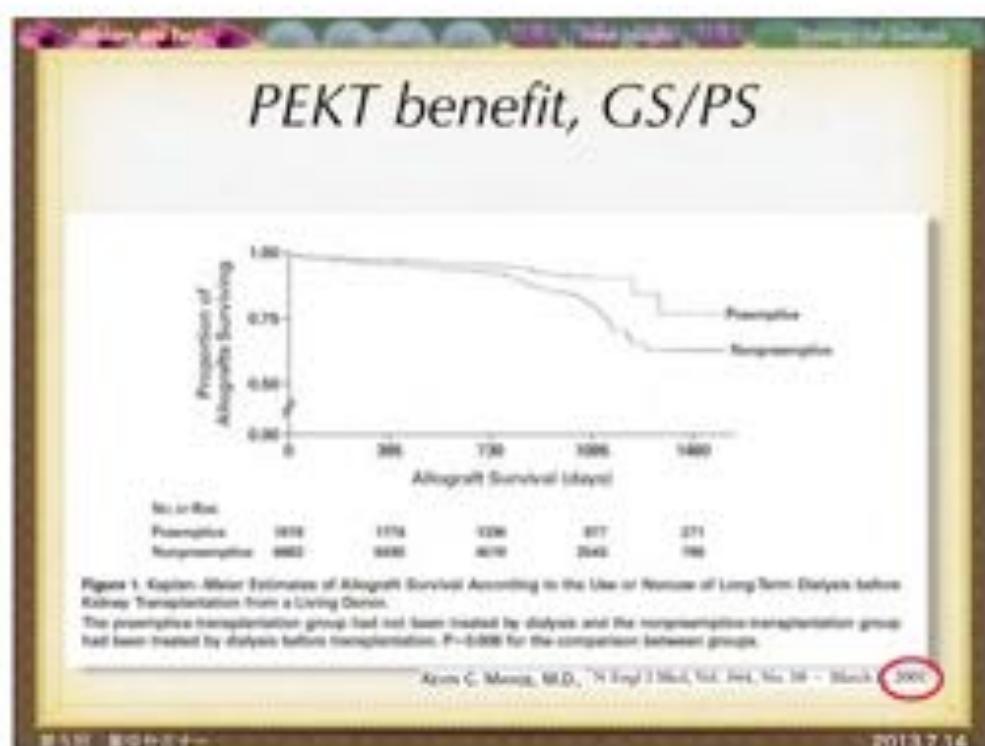


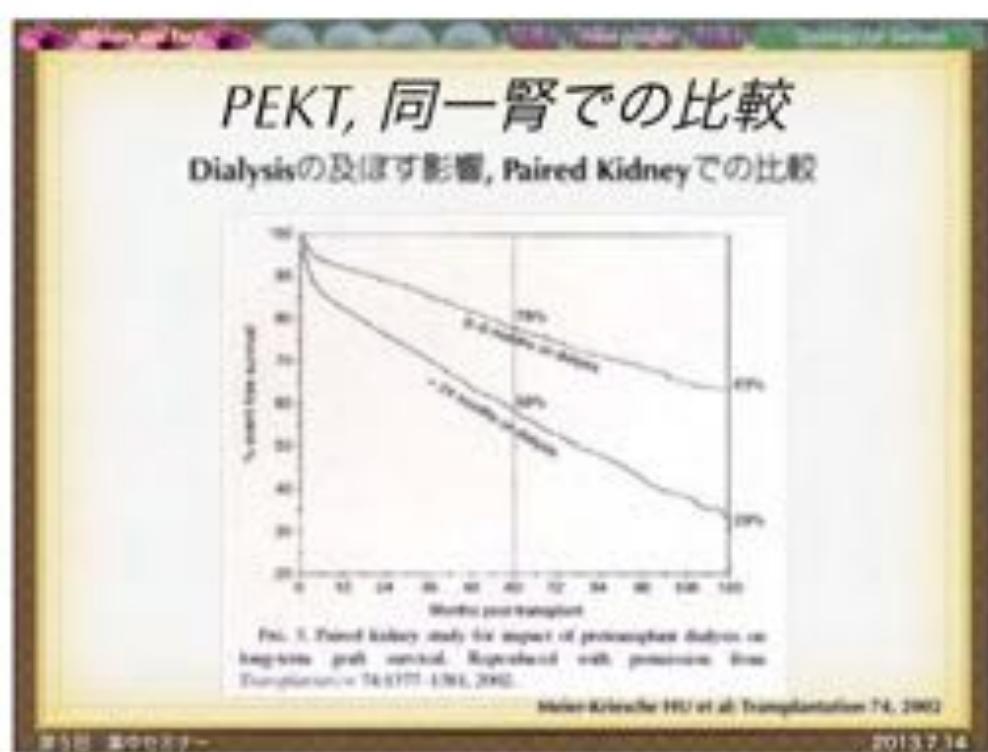
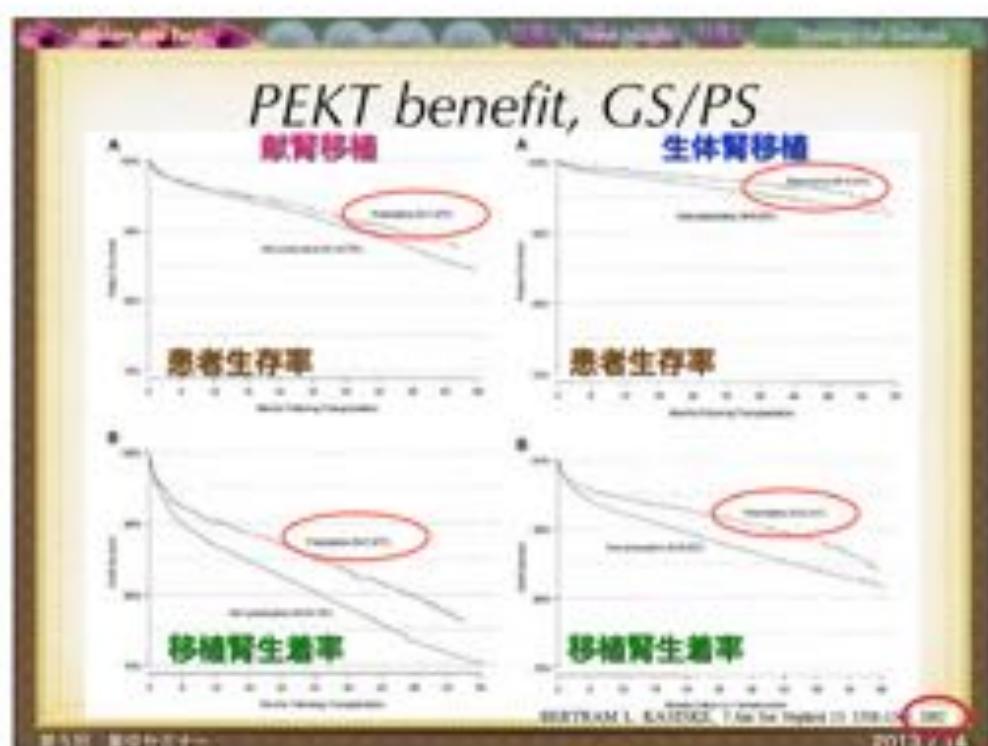


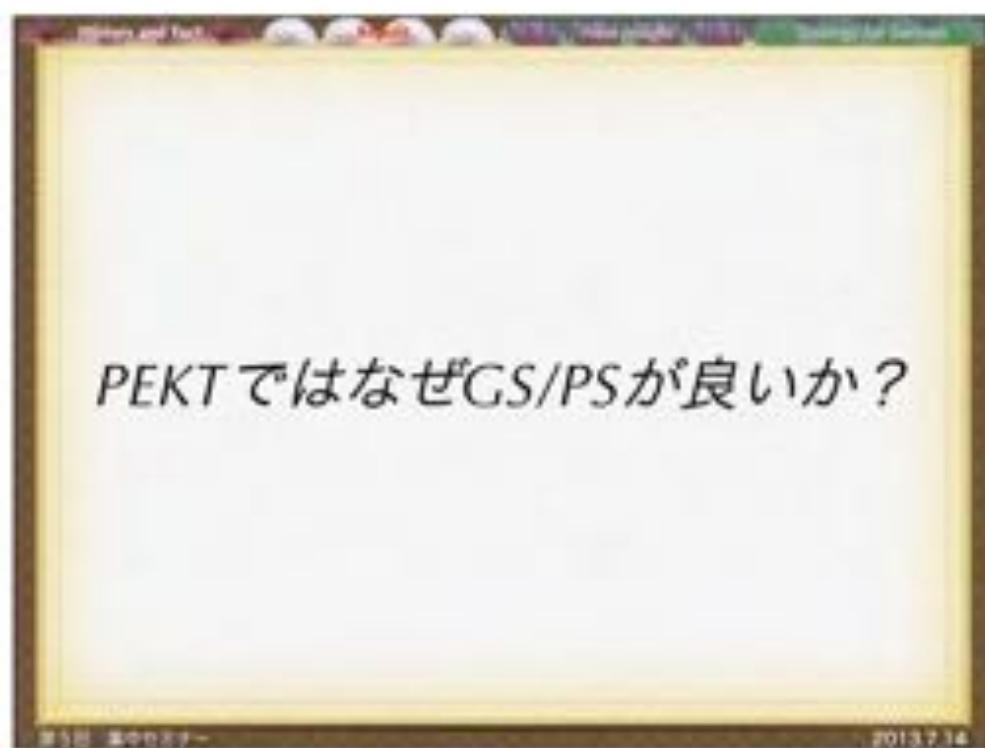
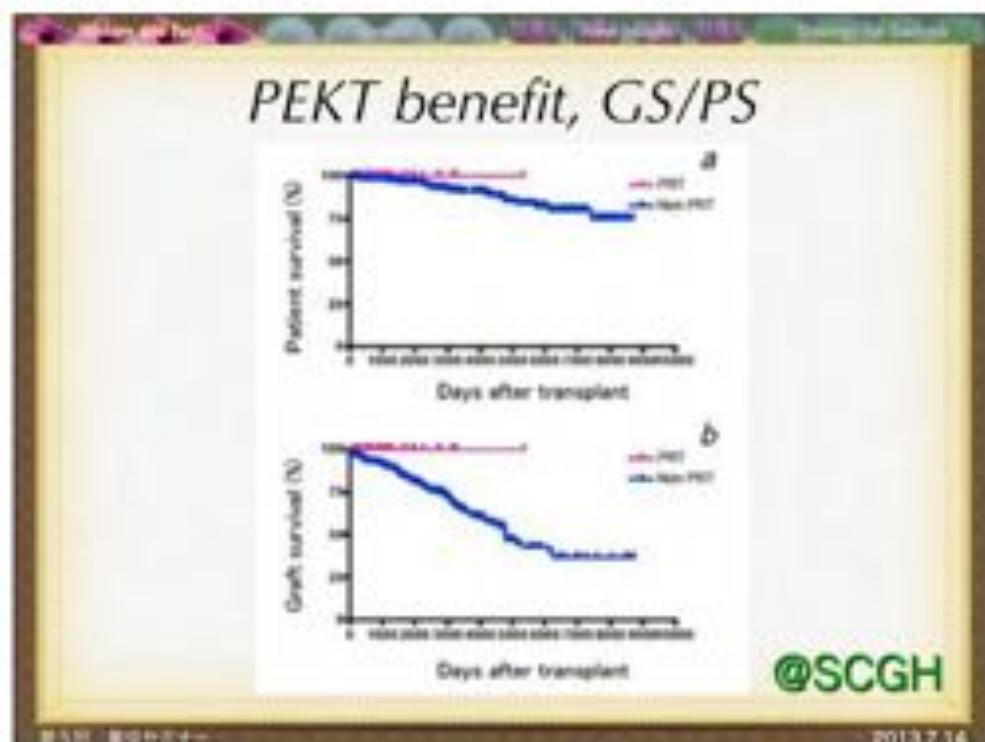


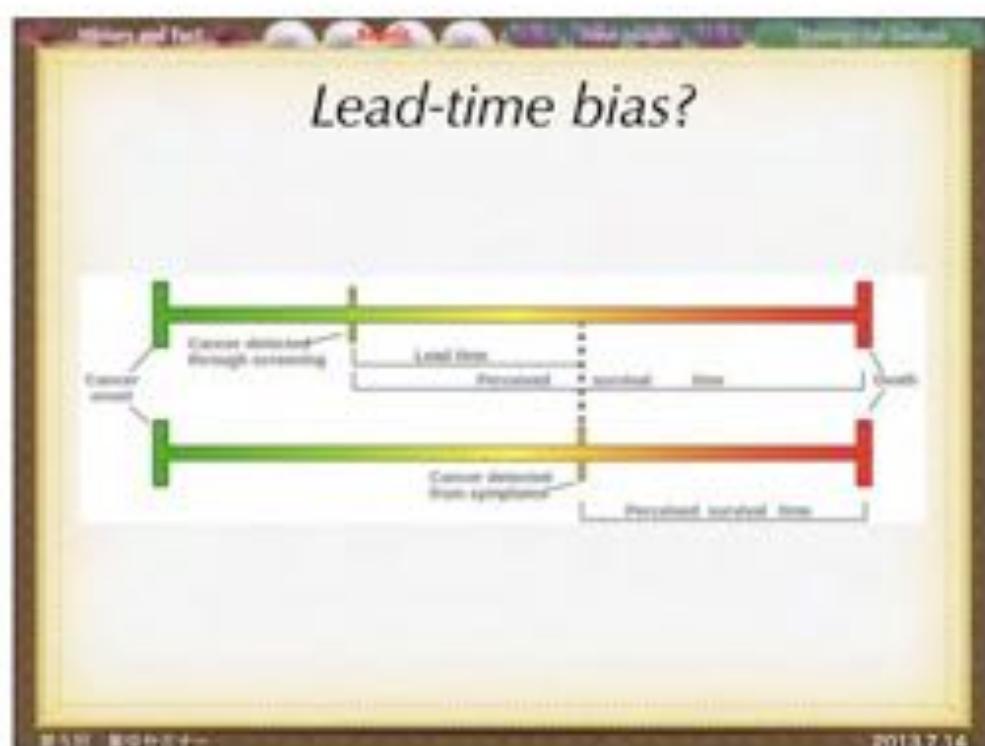
- ### Summary; Benefit
- ✓ もともと行われていたKRT
  - ✓ 1990年ころからの概念
  - ✓ 日本においては15-20%がPEKT
  - ✓ 日本では献腎でのPEKTはほぼない
  - ✓ 地域差がある











### PEKTではARがない

Table 2. Rates of biopsy-confirmed acute rejection in the first year post-transplant

	Pre-emptive (n = 1819)	Non-pre-emptive (n = 6662)	P-value
By 7 days	0.22%	0.69%	0.019
By first month	3.16%	8.13%	0.001
By third month	6.05%	14.5%	0.001
By sixth month	7.09%	17.3%	0.001
By twelfth month	8.63%	20.0%	0.001

**PKTでは拒絶反応が  
1/3-1/2**

Murphy EK, et al. Nephrol Dial Transplant 18, 2003  
2013.7.14

## PEKTではARがない

TABLE 1. OUTCOMES IN THE STUDY GROUPS.\*

Outcome	PRETRANSPLANTATION (N=1818)	NONPRETRANSPLANTATION (N=6662)
	percent	
Delayed allograft function†	2.5	5.1
Reproxy-conditioned acute rejection within 6 mo	3.5	14.6
Graft failure	2.8	3.8
Death	0.2	0.3
Repeated transplantation	<0.1	0.1
Long-term dialysis	3.5	5.4

PEKTでは  
ARは1/3

\*The pretransplantation group had not been treated by dialysis and the nonpretransplantation group had been treated by dialysis before transplantation.

†Delayed allograft function was defined by the use of dialysis within the first week after transplantation.

N Engl J Med. Vol. 346, No. 10 - March 8, 2002

第2回 前半セミナー

2013.7.14

## PEKTではT cell機能が低下

Initiation of Hemodialysis Treatment Leads to Improvement of T-Cell Activation in Patients With End-Stage Renal Disease

Harald Kast, MD; Matthias Gremml, MD; Ulrich Seidler, MD; Martina Seidler, PhD,  
and Hans Küller, MD

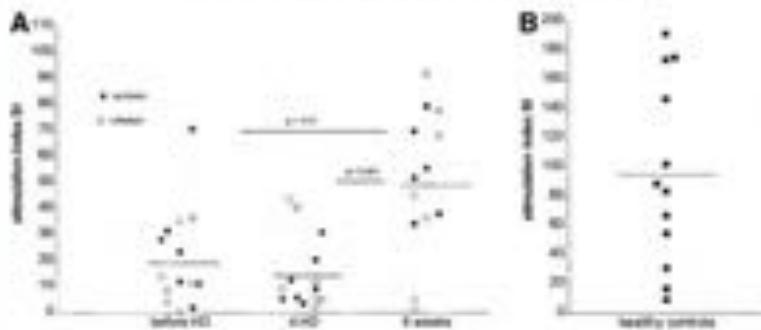
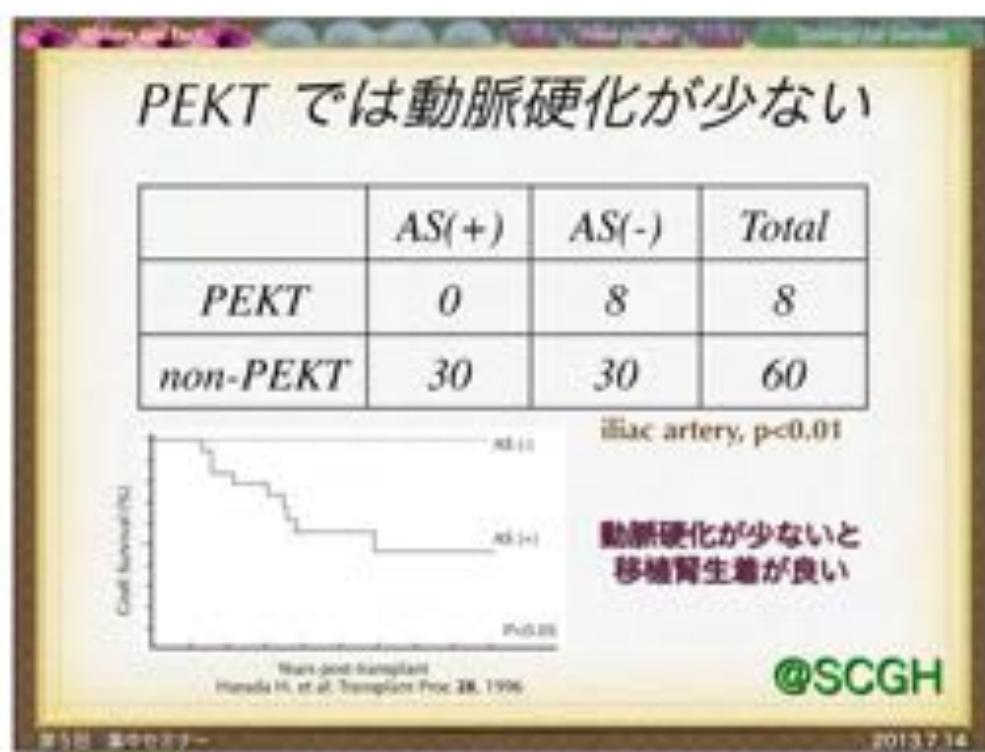
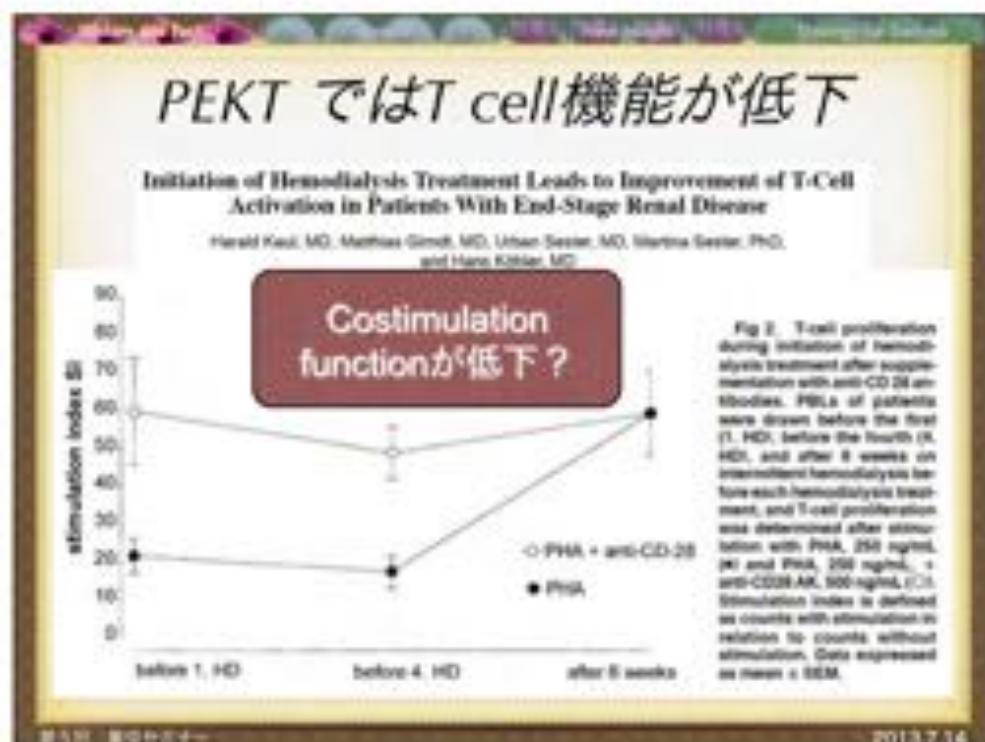


Fig 1. T-cell proliferation during initiation of hemodialysis treatment. (A) Proliferation of patients were drawn before the first hemodialysis treatment (before HDI), before the fourth hemodialysis treatment (4 HDI), and after 6 weeks on intermittent hemodialysis before HDI. We determined T-cell proliferation after stimulation with PHA, 250 ng/ml. Stimulation index is defined as counts with stimulation in relation to counts without stimulation.  $P < 0.05$  is considered significant. (B) The control group consisted of 12 healthy persons. T-cell proliferation of controls (30,  $14.9 \pm 10.80$ ) was significantly greater compared with patients (controls versus first HDI:  $P < 0.001$ ; controls versus 6 weeks:  $P < 0.05$ , Mann-Whitney test).

第2回 前半セミナー

2013.7.14



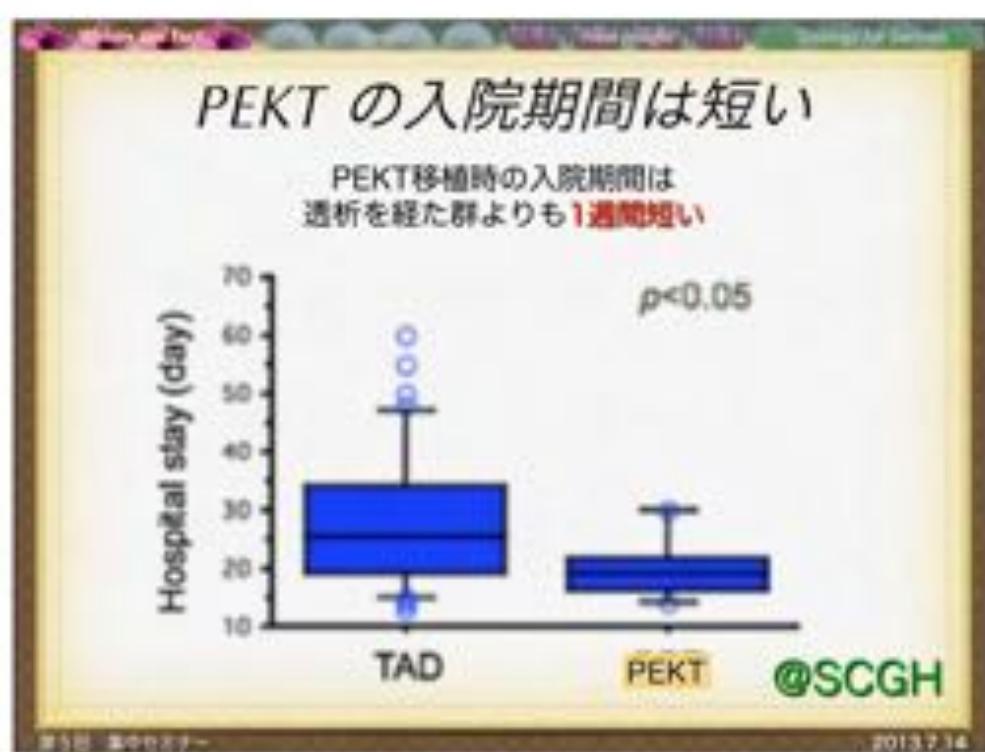
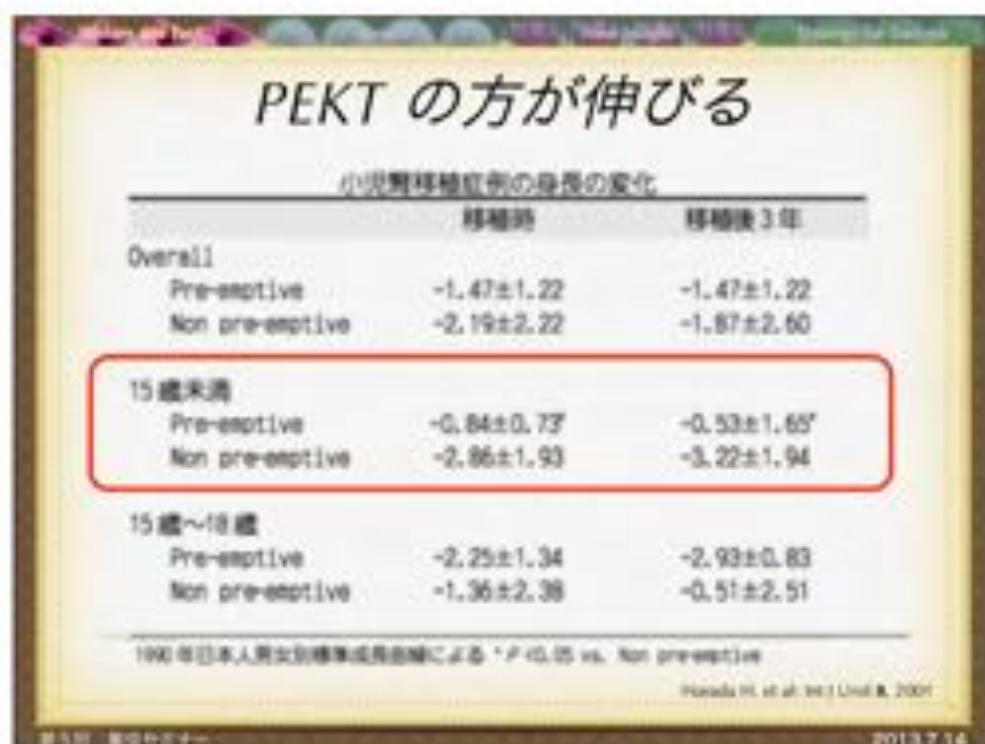
## 手厚いCKD管理のおかげ？

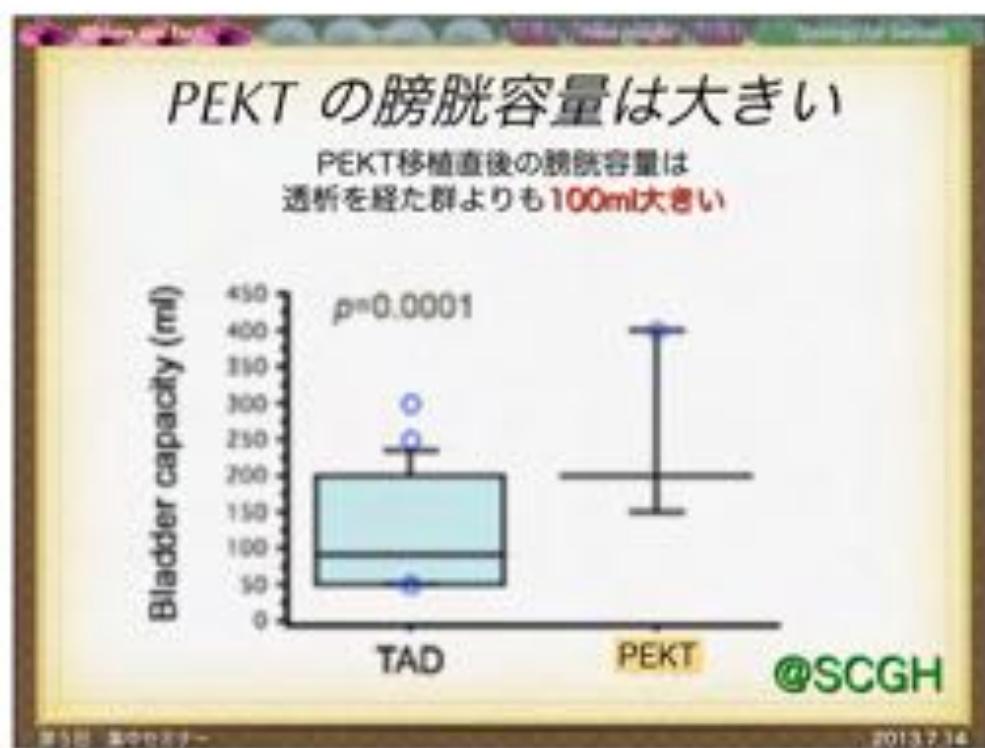
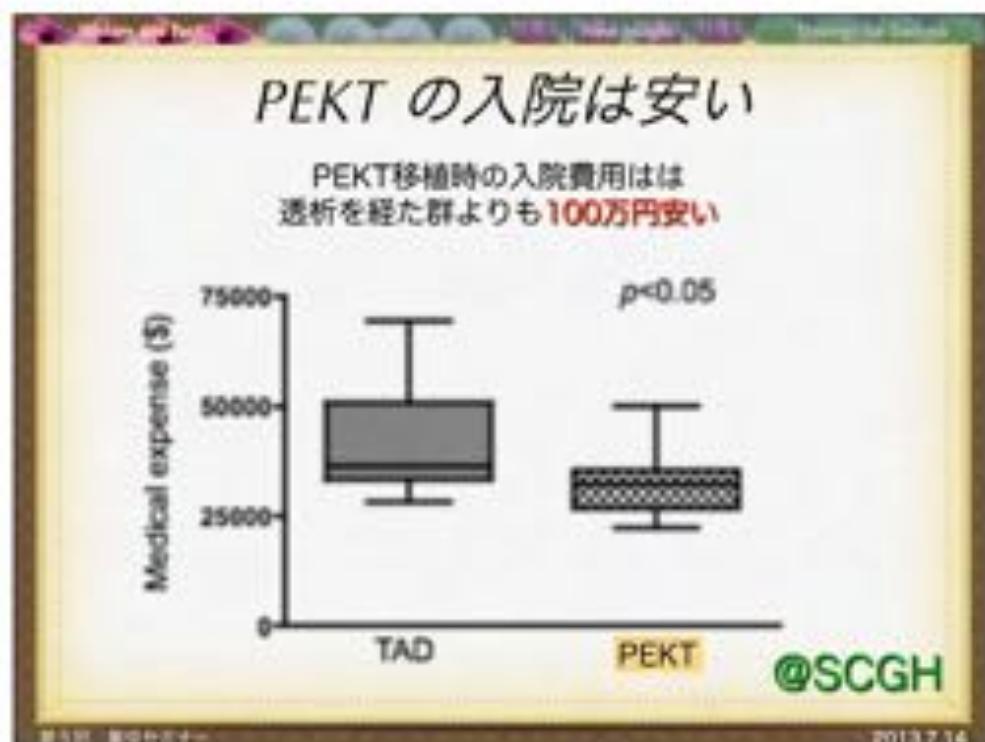
- ✓ Private Insurance
- ✓ Early referral
- ✓ 大規模医療機関
- ✓ 経験豊富なNephrologist
- ✓ 都市部での診療
- ✓ 付随するScreeningの励行

第1回 基本セミナー 2013.7.14

GS/PS以外のbenefit

第1回 基本セミナー 2013.7.14





萎縮膀胱ではVURが多い

頻尿がないという話のみではないです

	VUR (n=32)	No VUR (n=111)	
Tmx (triple/quadruple)	25/7	NS	77/35
Age	34.5 ± 1.9	NS	36.1 ± 1.2
Gender (M/F)	16/18	NS	73/38
Live/ Cadaveric	23/9	p = .0002	96/5
HD period (>10/ $\pm$ 50y)	31/11	p = .0026	94/7
Bladder Cap (>50/ $\pm$ 50ml)	24/8	p = .0009	97/4
AR (yes/no)	9/23	NS	33/78
Follow-up period (d)	1538.2 ± 156.5	NS	1480.9 ± 84.0

@SCGH

第1回 集中セミナー 2013.7.14



## 間接的メリット

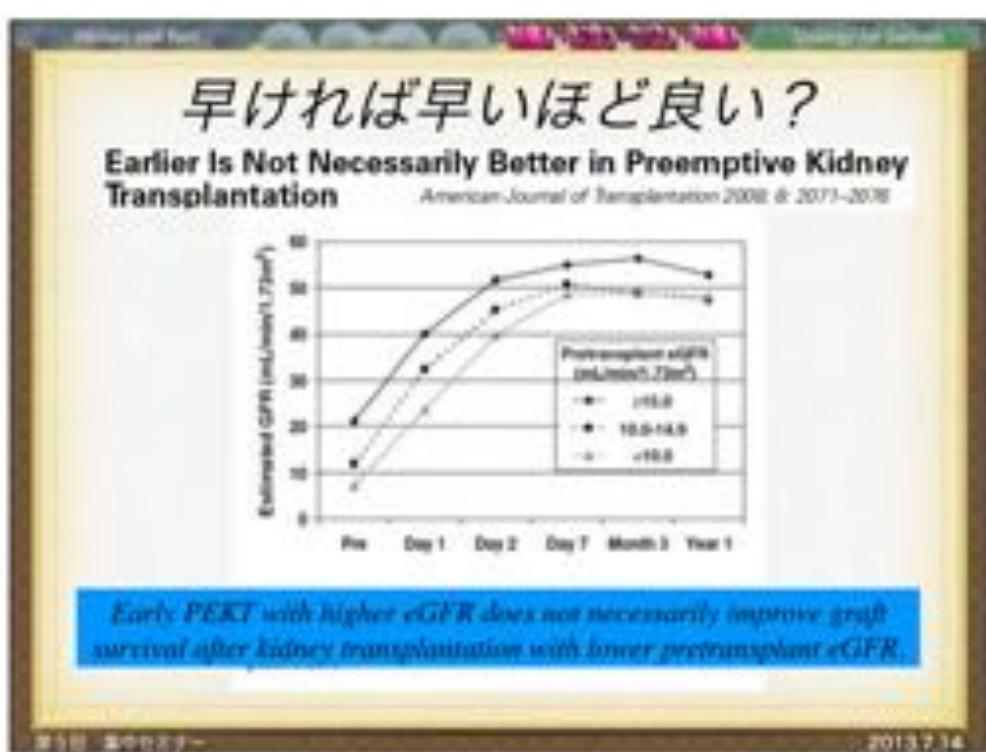
保存期CKDケアの質の向上

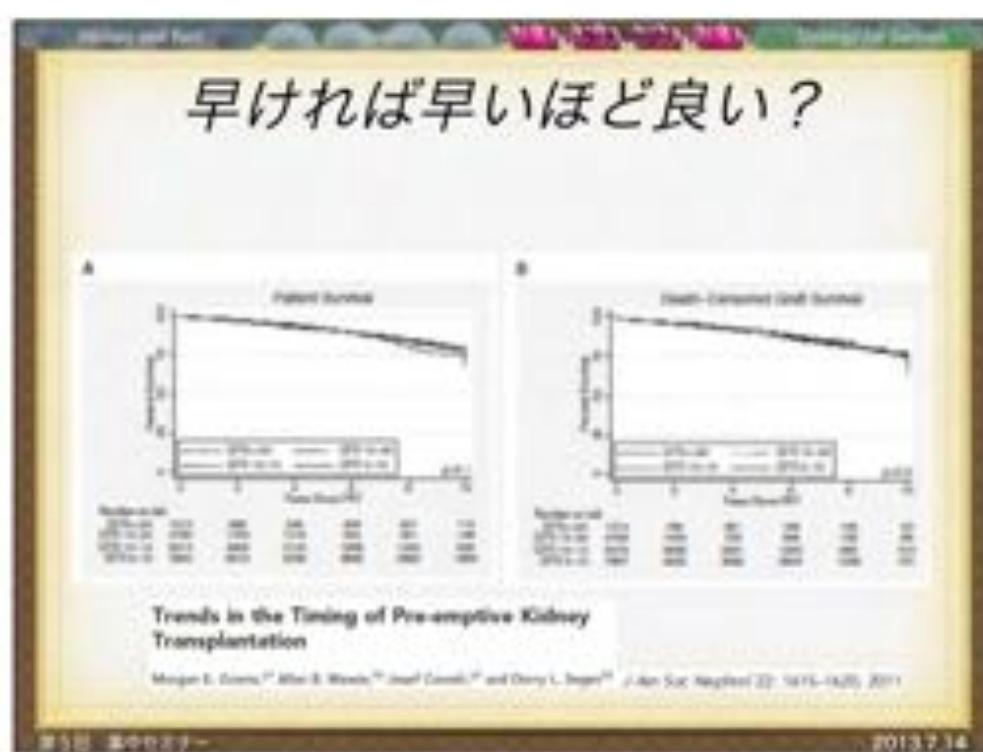
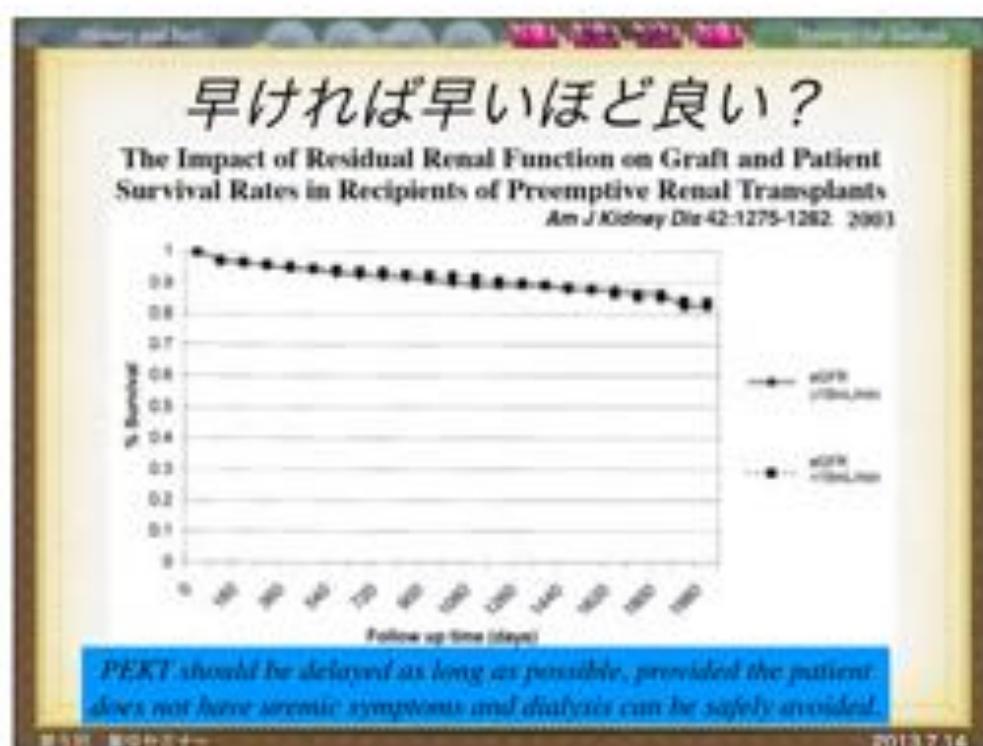
- ✓ より早期における専門医の診療 (Early referral)
- ✓ 感染症、癌スクリーニング率の向上
- ✓ ワクチン摂取率向上 (HBV, pneumococcus)
- ✓ CVDスクリーニング・積極的IHD除外
- ✓ CKD-MBD・Anemiaへの積極的治療

柴地有香、今日の移植2012

## Summary; Benefit

- ✓ GS/PSが良い
- ✓ QoLが良い
- ✓ 医療経済的にも良い
- ✓ 小児では身長の獲得、精神発達面で利点
- ✓ 透析に関する事象のBy-pass
- ✓ 膀胱機能を維持したままの手術





## PEKTはDGFを回避するだけ？

Presemptive Living Donor Kidney Transplantation: Do the Benefits Extend to All Recipients?

John R. Israni, Neal M. Walsh, Michael Pascual, Patrick G. Davis, Edward J. Stevens, Stephen J. Travers, Bruce A. Freedman, Timothy S. Larson, Francisco Cossio, Ray Ellings, Lynne Fox, Charles Boer, and Mark D. Ingoff

**TABLE 1.** Early and late complications after presemptive and nonpresemptive kidney transplantation

	Presemptive	Nonpresemptive	P value
n	210	247	
Early complications			
Delayed graft function	7 (4%)	24 (10%)	0.018
Primary nonfunction	3 (2%)	7 (3%)	0.58
Acute rejection	39 (11%)	39 (16%)	0.11
Wound complications	32 (17%)	47 (19%)	0.34
Late complications			
Cardiovascular	14 (7%)	17 (7%)	0.86
Infection	31 (14%)	44 (18%)	0.89
Surgical	24 (13%)	35 (13%)	0.81

## 移植腎機能は変わらない

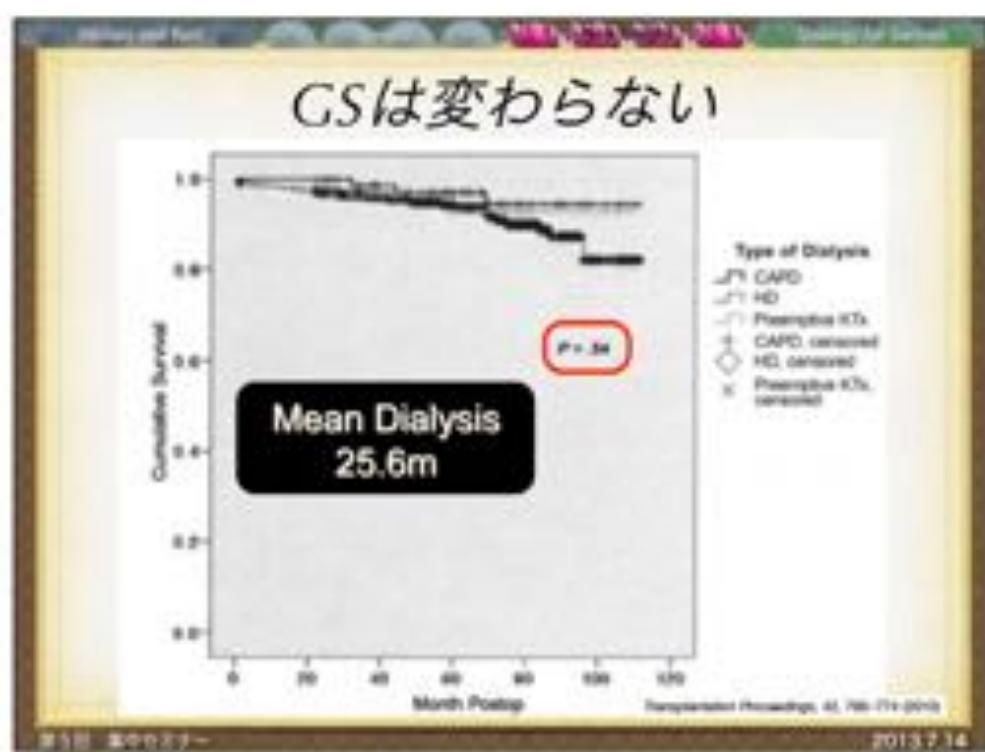
Presemptive Living Donor Kidney Transplantation: Do the Benefits Extend to All Recipients?

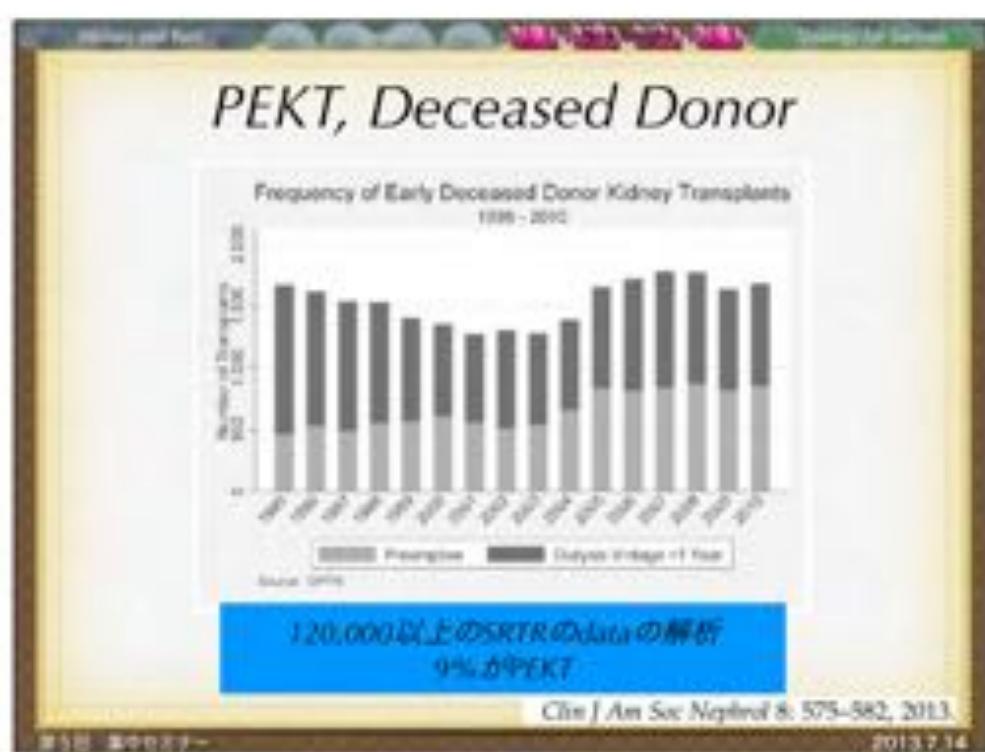
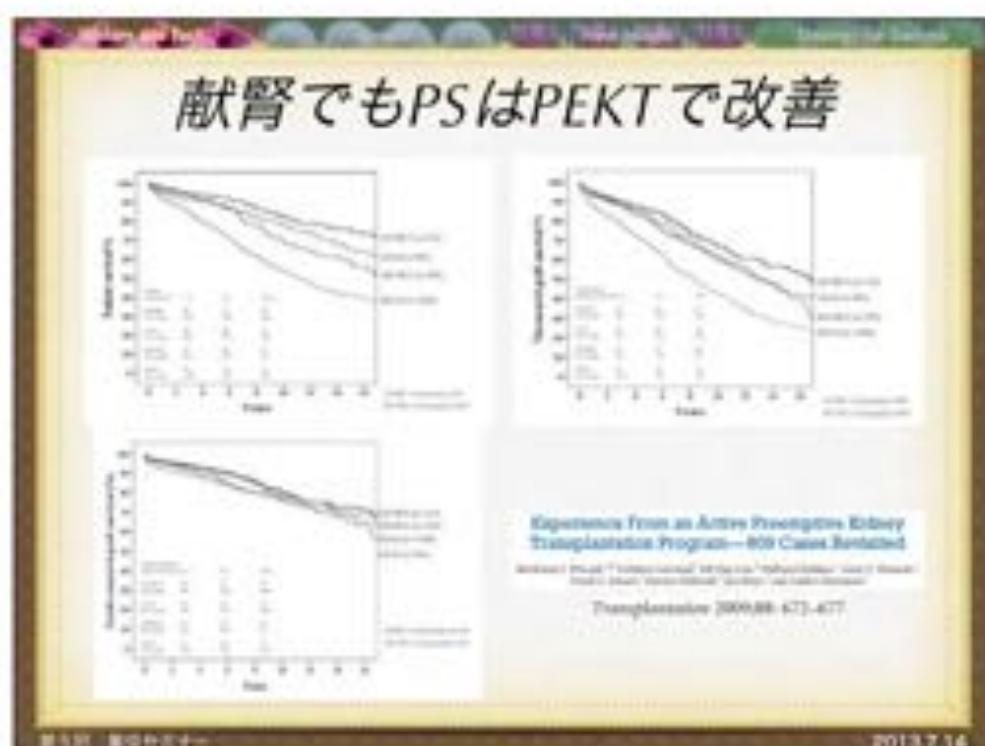
John R. Israni, Neal M. Walsh, Michael Pascual, Patrick G. Davis, Edward J. Stevens, Stephen J. Travers, Bruce A. Freedman, Timothy S. Larson, Francisco Cossio, Ray Ellings, Lynne Fox, Charles Boer, and Mark D. Ingoff

**Iothalamate Clearance**

Time Point	Non-Presemptive Median GFR (ml/min/1.73m²)	Presemptive Median GFR (ml/min/1.73m²)	Significance
1 Year	~105	~105	P=0.2440
2 Years	~105	~105	P=0.1388
3 Years	~105	~105	P=0.3625

**FIGURE 2.** Renal function as measured by iothalamate clearance.





*PEKT, Deceased Donor*

Table 3. Independent associations of early dialysis (adjusted) year versus preoperative deceased donor kidney transplant living with patient mortality and death-censored graft loss, 1995-2011

Adjustment Type	Population Analyzed	Death (Hazard Ratio, 95% Confidence Interval)	Death-Censored Graft Loss (Hazard Ratio, 95% Confidence Interval)
Multi-variate <sup>a</sup>	Full population <sup>b</sup>	1.06 (1.00-1.12, P=0.07)	1.23 (1.15-1.32, P<0.001)
DEKT <sup>c</sup>	Full population <sup>d</sup>	1.09 (1.03-1.14, P=0.005)	1.25 (1.17-1.34, P<0.001)
Proportionally matched <sup>e</sup>	Proportionally matched <sup>f</sup>	1.06 (1.00-1.14, P=0.06)	1.20 (1.12-1.30, P<0.001)
Multi-variate <sup>a</sup>	10-variable matched <sup>g</sup>	1.05 (0.97-1.13, P=0.20)	1.26 (1.17-1.36, P<0.001)
Multi-variate <sup>a</sup>	Recipients under 65 yr	1.03 (0.96-1.10, P=0.30)	1.29 (1.16-1.34, P<0.001)
Multi-variate <sup>a</sup>	Recipients aged 65 yr and older	1.19 (1.10-1.28, P=0.007)	1.12 (0.90-1.33, P=0.30)

<sup>a</sup>Adjusted for all variables listed in Table 1 with the exception of blood type.  
<sup>b</sup>881 early or preoperative deceased donor transplant recipients ( $n=21,423$ ).  
<sup>c</sup>Proportionally matched population ( $n=18,770$ ).  
<sup>d</sup>Matched on sex, race (African American vs. non-African American), prior transplantation status, cross antigen mismatch status, donor age, recipient age, transplant year, and waiting time ( $>18$  mo).

Clint J Am Soc Nephrol 8: 575-582, 2013.

2013.7.14

*PEKT, 2nd KTx*

FIGURE 1. Time to all cause graft loss.

$p < 0.001$

TABLE 4. Risk of DGF by the duration of dialysis between first and second transplantation

Method of increasing analysis duration between first and second transplantation	Hazard ratio of increasing analysis duration between first and second transplantation compared with reference preoperative second transplantation
Preoperative second transplantation, $\geq 7$ days dialysis after first transplant failure	1.00
Dialysis 1.00 to 0.9 yr	1.06 (1.00-1.27)
Dialysis 1.1-1.9 yr	1.29 (1.16-1.32)
Dialysis 2.2-4 yr	1.39 (1.34-1.47)
Dialysis 4-7 yr	1.32 (1.28-1.36)

<sup>a</sup>Model stratified by dialysis post

2nd KTx でも PEKT の方が良い。  
2nd KTx でも透析が長いほど DGF リスクが増加する

(Transplantation 2013;95: 705-710)

2013.7.14

## Summary; New Insight

- ✓ 短期間の透析はGS/PSに影響しない
- ✓ 短期間の透析は移植腎機能にも影響しない
- ✓ 日本では献腎でのPEKTはほぼない
- ✓ 2nd KTxでもPEKTの方がGSが良い

Strategy for Success

## 知っていそうで知らない事実

第5回 集中セミナー

2013.7.14

## PEKTでも1級になれる

腎移植を行った日から1級です



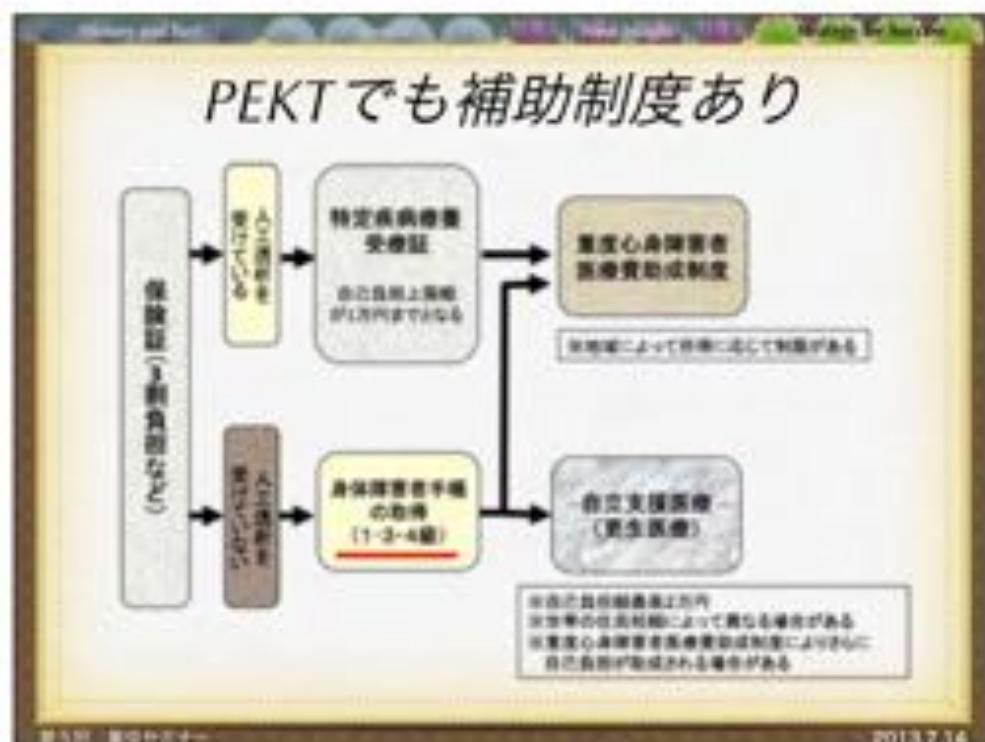
級別	じん腫機能障害	Ccr/sCr
1級	じん腫の程度により日常生活に制限があるもの	<10/8
2級		
3級	じん腫の程度により家庭内で日常生活活動が著しく制限されるもの	10-20/5-8
4級	じん腫の程度により社会で活動が著しく制限されるもの	20-30/3-5

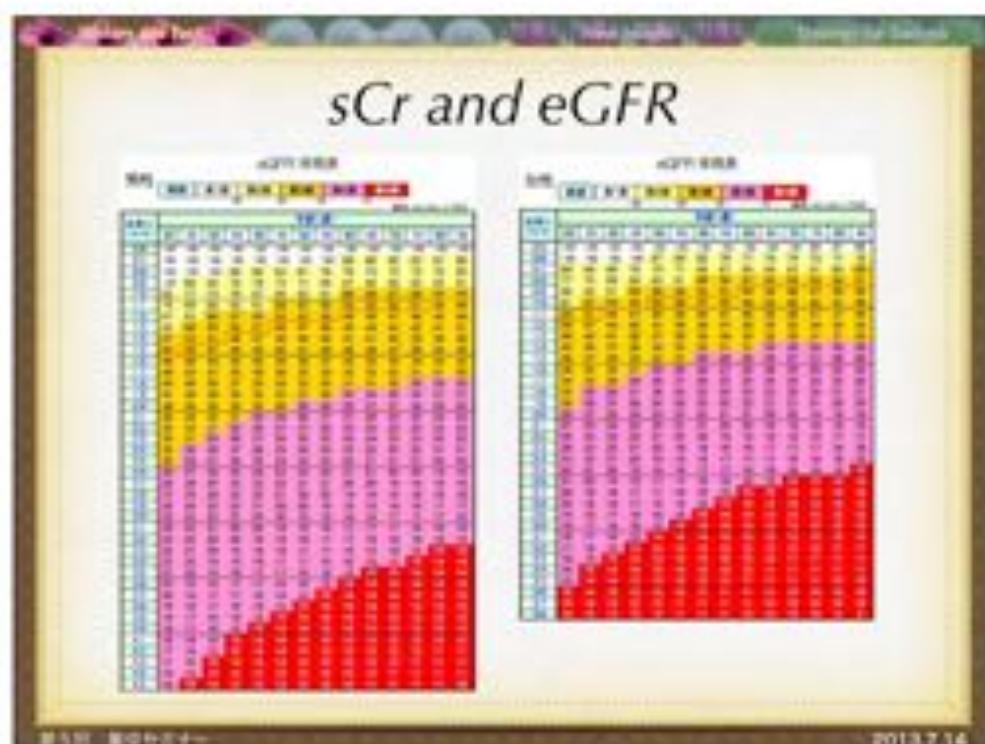
### 疑義解釈

腎移植を行ったものは、既免疫抑制法の確認を要する期間は、これを実施しないと再び腎機能の障害の危険性があるため、既免疫抑制法を実施しないと仮定した状態を想定し、1級として認定することが適当である

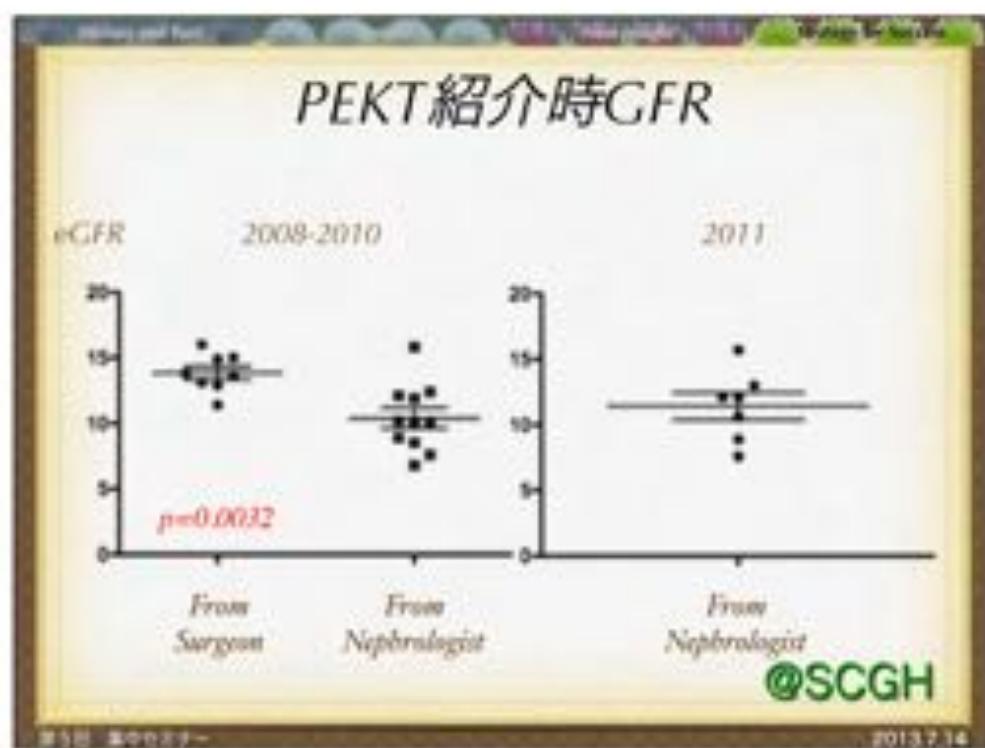
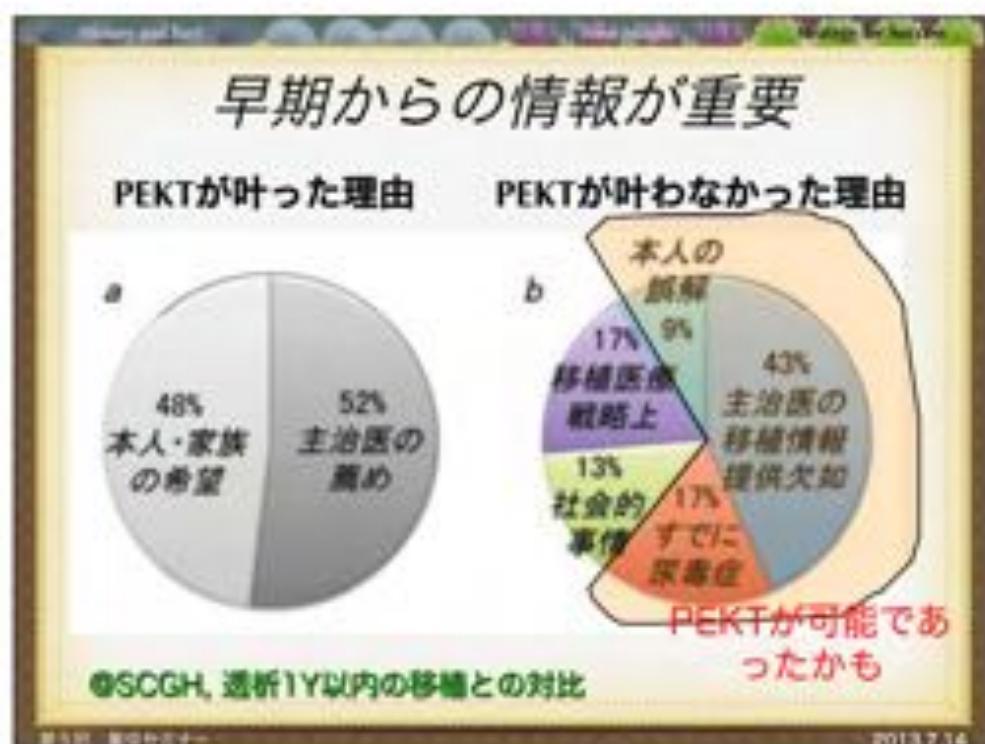
第5回 集中セミナー

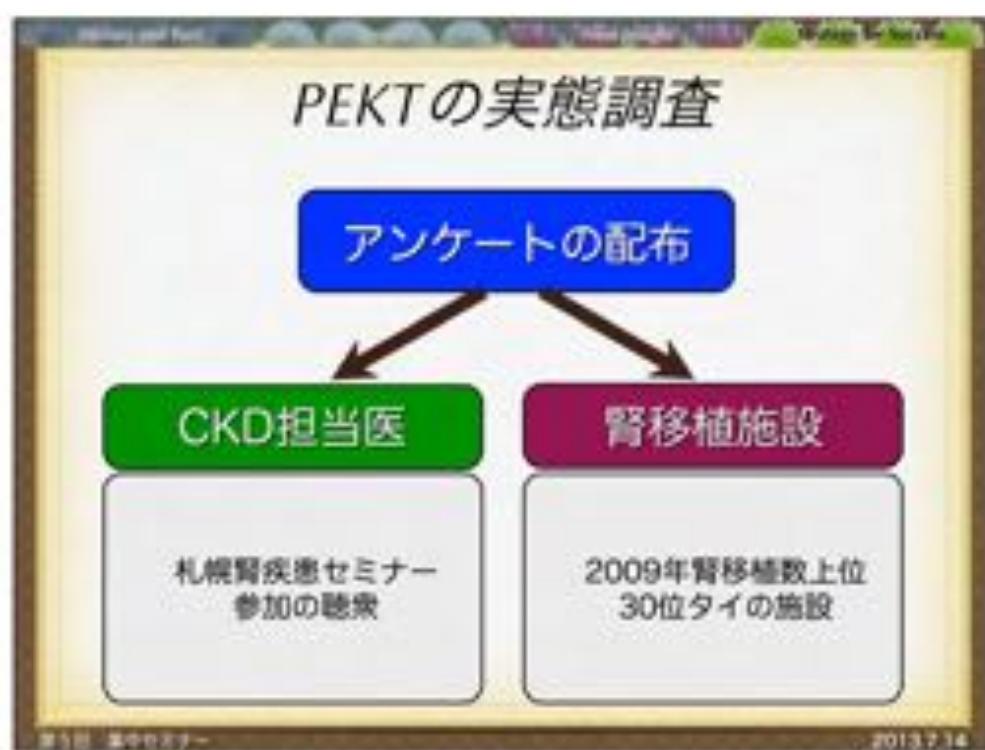
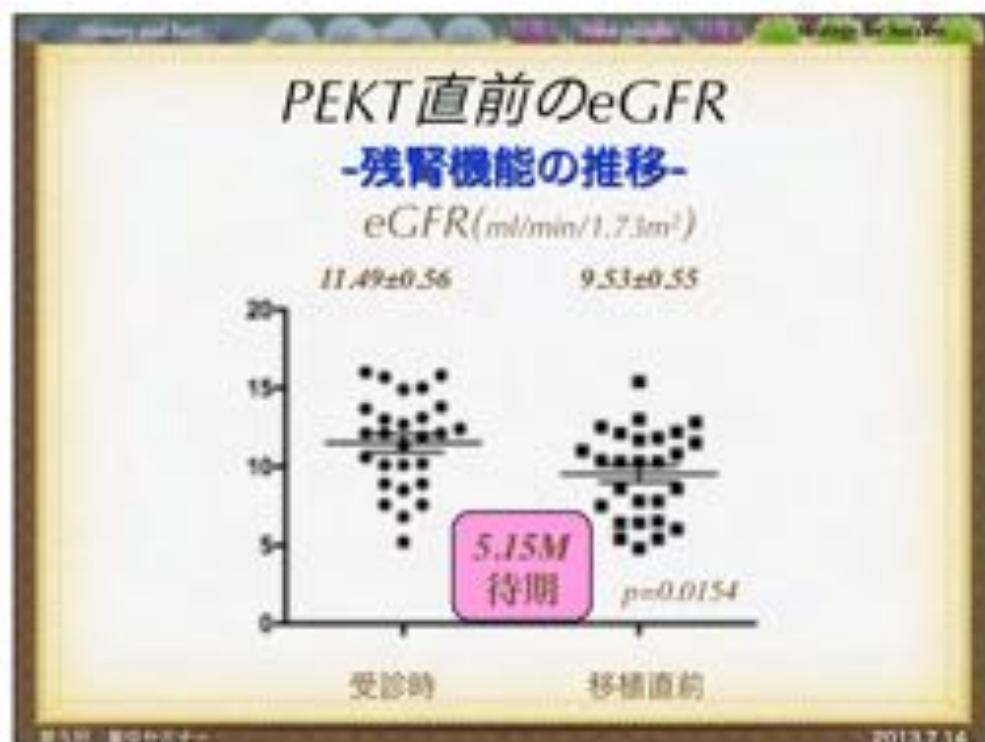
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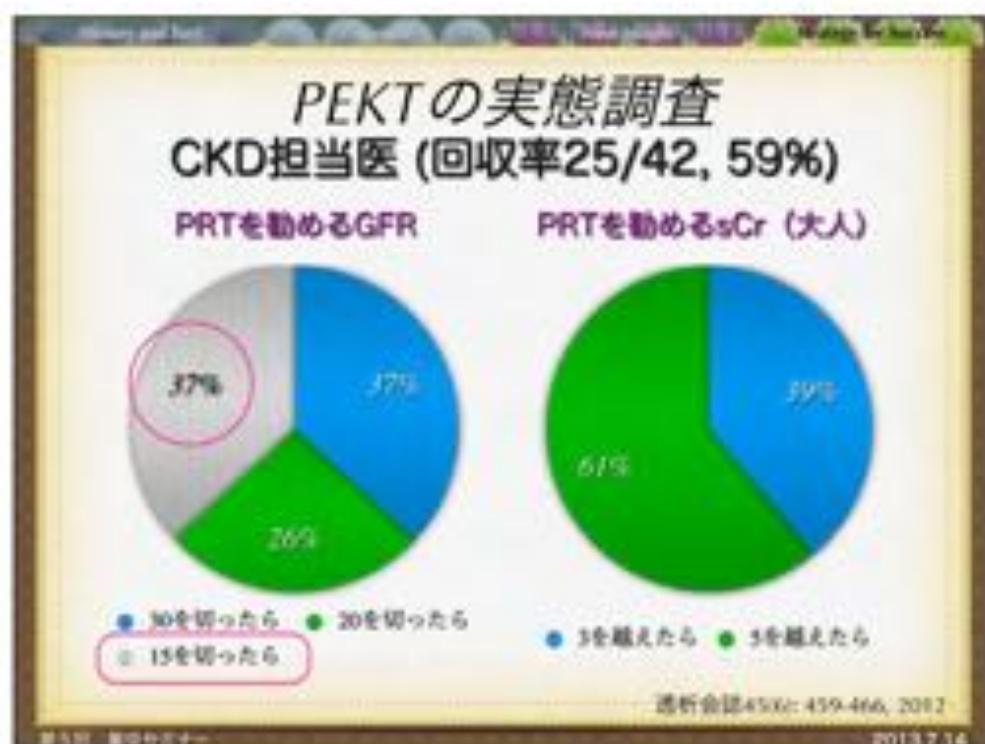


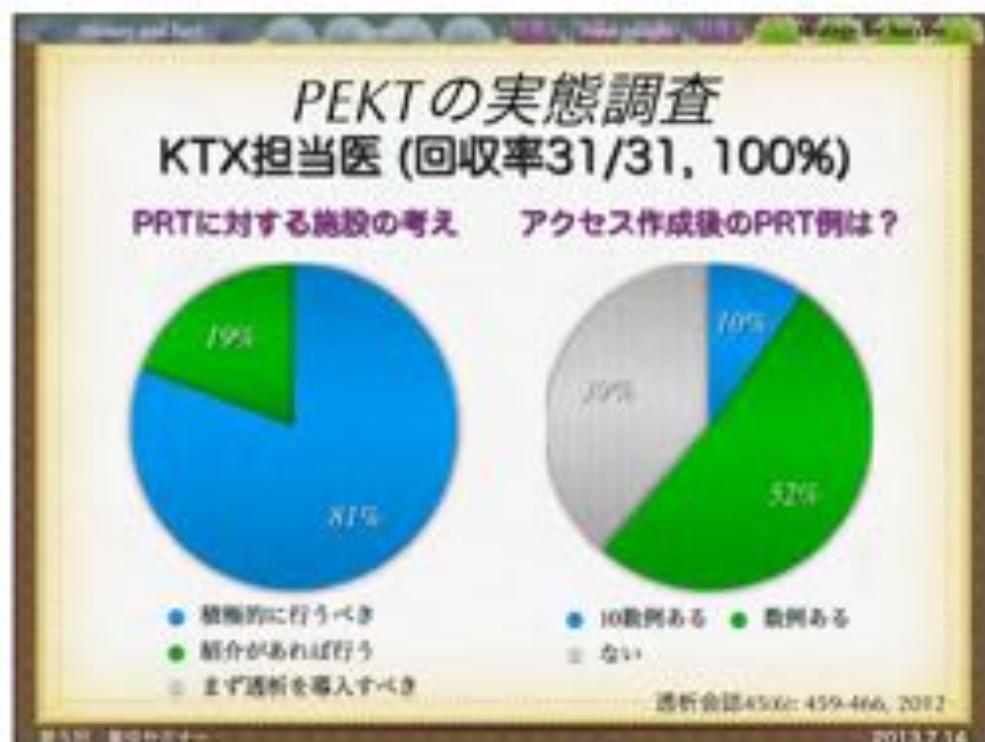














**MSWの力も無視できない**

AJKD  
Original Investigation

**Effectiveness of Educational and Social Worker Interventions to Activate Patients' Discussion and Pursuit of Prospective Living Donor Kidney Transplantation: A Randomized Controlled Trial**

J. Allore, Bhatnagar, MD<sup>1,2</sup>; Valeria M. Boggs, PhD<sup>1,2</sup>; Edward J. Glantz, MD<sup>1,2</sup>; J. Scott Bernstein, MD<sup>1,2</sup>; Jennifer Pernell, MA<sup>1,2</sup>; Paul S. Agusson, MD<sup>1,2</sup>; Barbara C. Jones, MD<sup>1,2</sup>; Luis Girones, MD<sup>1,2</sup>; Michael J. Kusek, MD<sup>1,2</sup>; Michael George, MD<sup>1,2</sup>; Marc Krasner, MD<sup>1,2</sup>; Jeffrey L. Greene, MD<sup>1,2</sup>; Christopher Davis, MA<sup>1,2</sup>; Carolyn Lages, MA<sup>1,2</sup>; Michael D. Fischbeck, MD<sup>1,2</sup>; Robert Rosenthal, MPH<sup>1,2</sup>; and Neil R. Powis, MD<sup>1,2</sup>

**Background:** Living donor kidney transplantation (LDKT) is an increasingly common approach for the treatment of end-stage renal disease, reducing transplant waiting times and improving patient survival. Despite this success, many patients do not pursue LDKT because of lack of knowledge about the process and lack of support from their healthcare providers.

**Setting:** In this randomized trial, the authors compared self-progressive (SP) and systematic (SM) educational interventions to encourage patients to discuss and pursue LDKT with their healthcare providers.

**Intervention:** Intervention participants received 10 visits over 6 months with their healthcare provider via telephone or in-person visits.

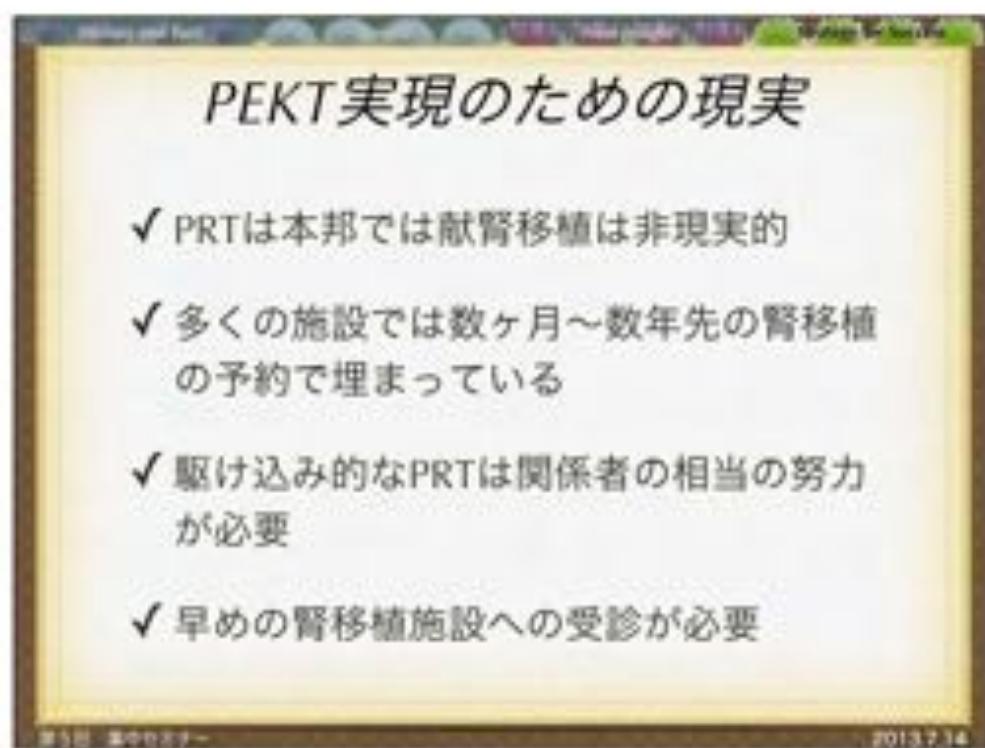
**Main Outcomes and Measures:** The primary outcome was the percentage of patients who initiated LDKT after 6 months. Secondary outcomes included the number of patients who initiated LDKT, the number of patients who pursued LDKT, and the number of patients who received LDKT.

**Results:** Participants receiving the SP intervention (n = 103) had a significantly higher rate of LDKT initiation (40%) than did those receiving the SM intervention (n = 100; 20%; P < .001). The mean age of the SP group was 41.6 years (range, 18–65 years) versus 41.5 years (range, 18–65 years) for the SM group. The mean education level was similar between groups (mean, 12.5 years [range, 8–16 years] for the SP group and 12.4 years [range, 8–16 years] for the SM group).

**Conclusion:** This study demonstrated that self-progressive educational interventions can increase the rate of LDKT initiation among patients with ESRD.

doi:10.1053/j.kid.2013.05.014

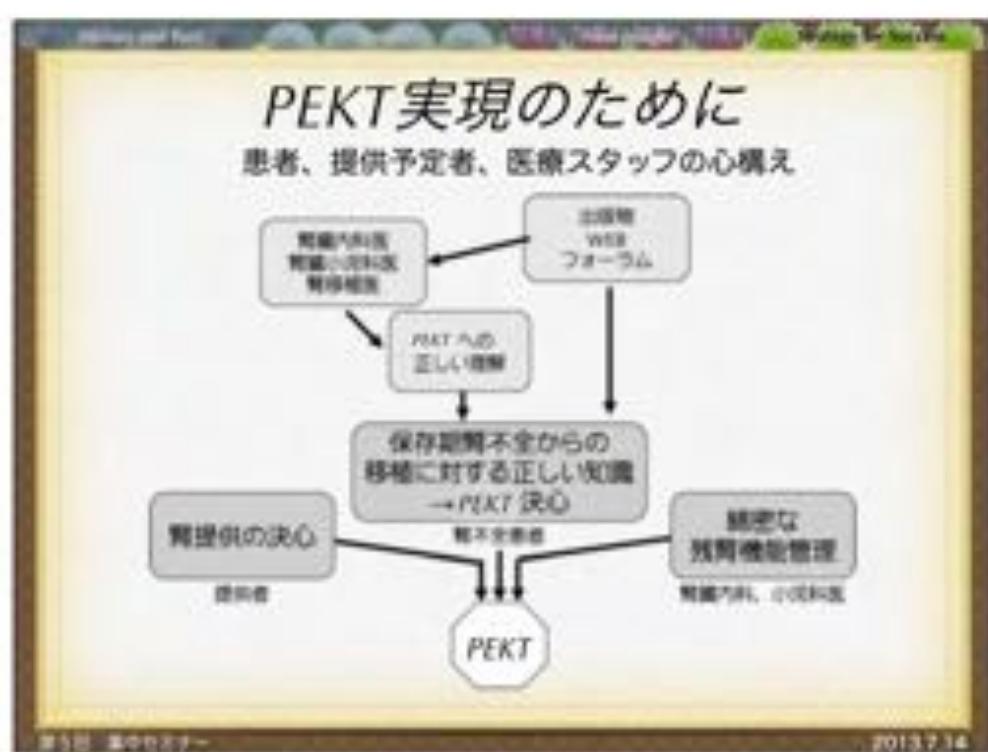
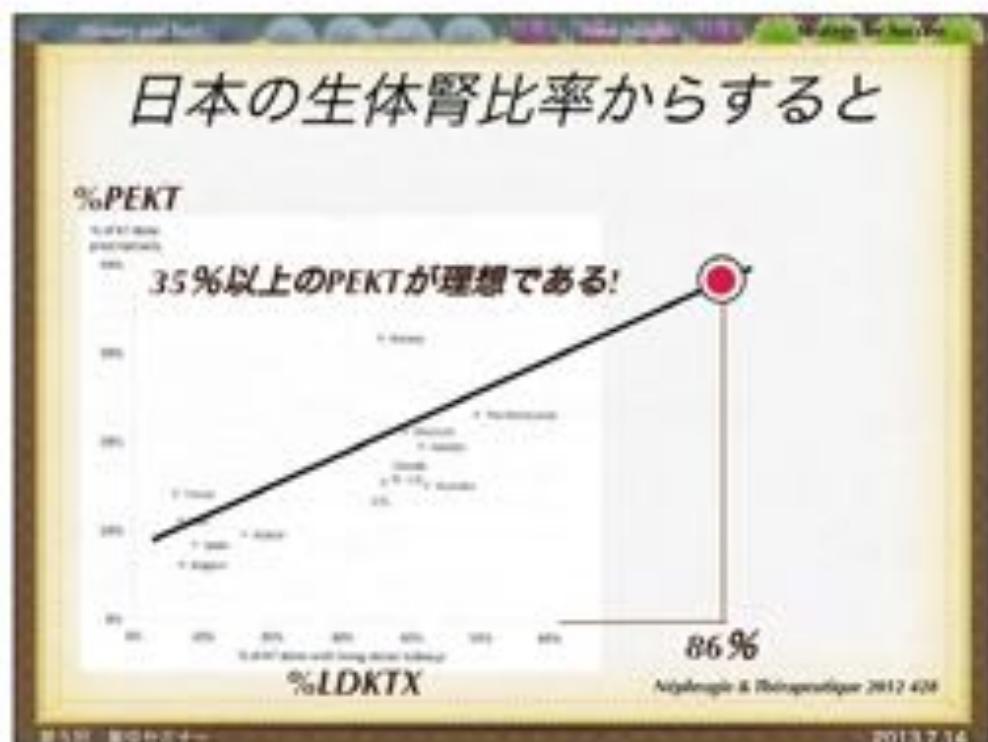
2013年7月14日



**PEKT実現のための現実**

- ✓ PRTは本邦では献腎移植は非現実的
- ✓ 多くの施設では数ヶ月～数年先の腎移植の予約で埋まっている
- ✓ 駆け込み的なPRTは関係者の相当の努力が必要
- ✓ 早めの腎移植施設への受診が必要

2013年7月14日



**Table 2 Weighing the preemptive transplant decision: advantages and risks**

**Recipient vs. donor?**

**With a transplant:**

- Have better chance of survival because 1 transplanted kidney approximates 50% to 80% of the work of 2 kidneys while 2-kidney approximates only 10% to 15%
- Absence of disease-related infections and health problems
- Generally live longer with a transplant than remaining on dialysis
- Better quality of life advantages: freedom from regular dialysis treatments, ability to travel with less restrictions, lower rates of depression, sleep problems, and sexual dysfunction
- No dietary and fluid restrictions for kidney function
- Greater ability to maintain employment, when maintaining health insurance

**Living donation vs. deceased donation?**

**With living donation:**

- Have to find a family member or friend who would be a donor
- Increase chance of finding a matching kidney during an organ shortage
- Can receive a kidney from a sibling who does not have to wait on the waiting list
- Low risk of transplant to be used immediately to recipient's health and donor's outcome
- Have greater chance of the kidney "lasting" longer than a deceased donor transplant

**Preemptive transplant vs. transplant after starting dialysis?**

**With a preemptive transplant:**

- Have to find a family member or friend who would be a donor
- Donor generally live longer than with any other type of transplant
- Patients generally live longer with preemptive transplants than if they get transplants after starting dialysis
- Since patients will have better kidney function, they are healthier when undergoing surgery
- Patients experience less stress because they do not need to start and learn multiple treatment techniques

**Risks to recipient?**

- Risk of death from surgery, primarily due to the risk of anesthesia <1%, 1 in 3000
- Risk of surgical complications including infections, fever, bleeding, and blood clots <1%
- Risk of kidney failure in the first year 5% to 10%
- Immunosuppressive drugs may not be covered after 5 years

**Risks to living donor?**

- Risk of death from surgery, primarily due to the risk of anesthesia <1%, 1 in 3000
- Risk of problems for living donor's abdomen, fever, bleeding, blood clots, nausea, nerve damage, damage of other organs
- Living donor has a slightly increased risk of elevated blood pressure after donating
- Living donor who has their remaining kidney in the future would be given priority on the deceased donor waiting list

第2回 集中セミナー

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## PEKT実現の背景

- ✓ Private Insurance
- ✓ High education
- ✓ Caucasian
- ✓ Early referral
- ✓ Urban residence
- ✓ Higher residual eGFR
- ✓ DM nephropathy

Finsel et al, NDT 2012

第2回 集中セミナー

2013.7.14

## Nephrologistの経験差

### A Survey of Nephrologists' Views on Preemptive Transplantation

Transplant G. Pradell,<sup>1</sup> Rabih Jann,<sup>2</sup> C. Daniel Mallon,<sup>3</sup> Joseph A. Vassilas,<sup>4</sup> and Stephen T. Burckhardt<sup>5</sup>

**Surveyed nephrologists consider PEKT as the optimal modality for eligible patients. Late referral, patient health and insurance status, and delayed transplant center evaluation are perceived as major barriers to PEKT.**

背景:先行的腎移植(PEKT)は腎臓病の治療法として最も優れた方法である。しかし、PEKTを実施するには腎臓病センターでの評議会が必要である。腎臓病医はPEKTが適切な治療法であると認めたが、PEKTに対する態度は異なる。本研究では、PEKTに対する態度を評議会に参加する腎臓病医の意見を調査した。

方法:米国腎臓病学会の会員登録者からランダム抽出された腎臓病医300名を対象とした。調査票は郵送で実施され、回収率は65%であった。調査票は、PEKTに対する態度、PEKTに対する態度を評議会に参加する腎臓病医の意見を調査した。

結果:PEKTに対する態度を評議会に参加する腎臓病医の意見を調査した。PEKTに対する態度を評議会に参加する腎臓病医の意見を調査した。

結論:PEKTに対する態度を評議会に参加する腎臓病医の意見を調査した。

doi:10.1111/j.1600-0609.2008.00764.x

2013.7.14

## Nephrologistの経験差

### Table 3 Odds of nephrologists considering preemptive transplantation as the best treatment modality for eligible CKD patients\*

Characteristic (reference group)	Odds Ratio	95% CI
Male gender	0.274	0.108, 1.098
Board-certified nephrologists not board-certified	1.027	0.809, 2.252
Experience > 10 yr (experience < 10 yr)	0.407 <sup>a</sup>	0.226, 0.726
Hospital practice (private practice)	0.859	0.103, 1.398
Practices in rural area (urban, nonrural)	1.288	0.126, 3.154
Number of CKD patients >50 (≤50)	1.159	0.647, 2.080
Number of transplant patients >50 (≤50)	1.703	0.996, 2.889
Follows pediatric patients (no pediatric patients)	1.107	0.543, 2.636
Needs one consultant to evaluate patient to pursue preemptive transplantation (needs more than one consultant)	1.087 <sup>b</sup>	0.964, 2.027

\*CI, confidence interval.  
<sup>a</sup>P < 0.001.  
<sup>b</sup>P < 0.025.

2013.7.14



Figure 1. Factors contributing to delayed discussion about preemptive kidney transplant.

## 先行的献腎移植登録

登録料

先行的腎移植を希望して新腎移植登録する症例に関する登録基準と評価法

1. 先行的腎移植の申請と登録が適切に行われることを確認するため、評価委員会において、希望者的基本的情報と登録時からみて適切な登録ガイドライン検査データを確認し審査する。
2. 先行的腎移植希望者の新腎移植登録データ入力シート(登録基準)に必要な情報を記入し、登録情報に提出し、判定を受けた上で他の腎移植登録データに登録される。
3. 登録料(400円の登録料、20歳以上は500円を新規手数料換算料)、新規手数料(1,000円)を支払う。
4. 登録料の他に新規腎移植登録料の合算に新規登録料が控除している場合は除外し、実際登録料に新規登録料が控除されない登録料を支払う。
5. 年齢時の腎機能(14歳以下、成人: GFR 10 mL/min/1.73 m<sup>2</sup> 正常値、子供: 年齢の腎機能基準)以下のGFR(10 mL/min/1.73 m<sup>2</sup>)を登録料を支払う。
6. 登録料は1回で登録登録料を吟味し、新規登録料のみの場合は免除する。
7. 先行的腎移植登録に下通りに判別されるデータ漏れがある場合は登録料を免除しない。その他の先行的腎移植登録可能登録料に登録料が免除されることがある。

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先行的献腎移植登録

先行的腎移植希望者の総管査體用送付データ入力シート

【登録料済みデータ】申請年月日 2013年 7月 14日 申請者性別 女性年齢 30歳登録料申込料番号 2013-07-14-000001-0000000000000000

本姓  姓氏  営業登録番号

配偶姓氏  性別  年齢  性別  年齢

配偶名   
姓氏

連絡先番号   
郵便番号   
電話番号   
 fax番号

開院年月日

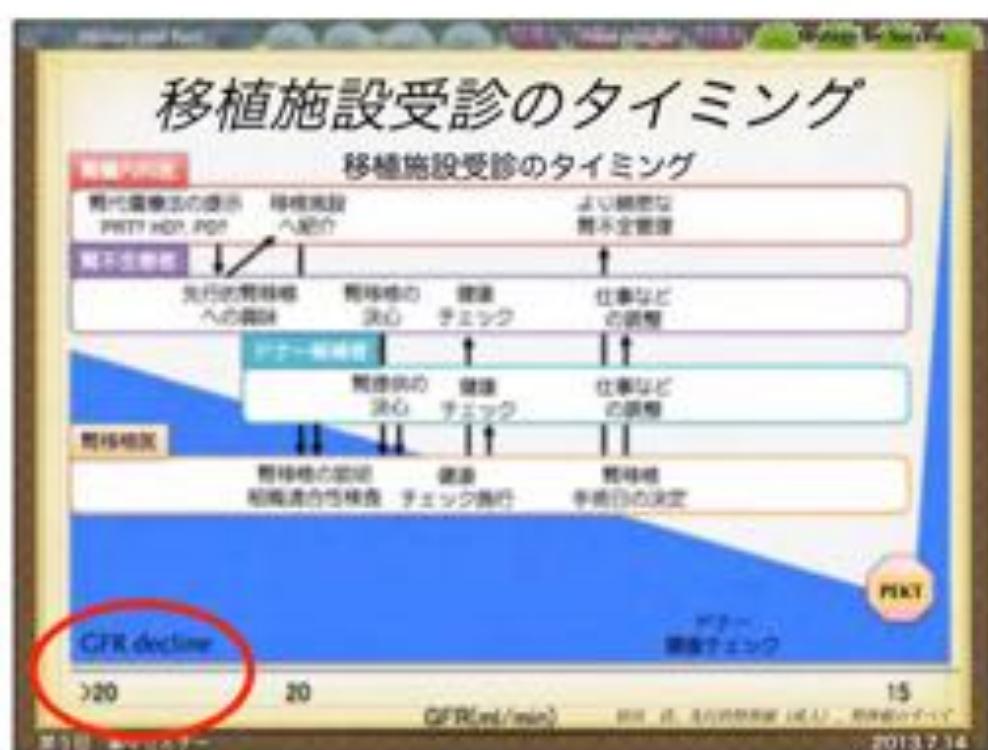
手術年月日

【登録料済みから現在までの経過報告】過去にいつで腎臓に診断を受けた  
いつで腎臓が初めて問題視され、腎臓の問題で定期的に外来を受診。また腎臓が初めて問題視されたときに腎臓が腎臓病になっていたが、以降腎臓は正常化し、治療も必要でない状態が続いている。  
現在の腎臓の状態が腎臓病で問題はコントロールできている。LHL-C値が正常し、腎機能正常になった。

【登録料済みの施設】HCG医療 HCG医療 HCG医療

【登録料済みデータ】  
既婚既育子   
既婚未育子   
既育未育   
S-O   
S-T

2013.7.14



## Summary; Strategy for Success

- ✓ もともと行われていたKRT
- ✓ 1990年ころからの概念
- ✓ 日本においては15-20%がPEKT
- ✓ 日本では献腎でのPEKTはほぼない
- ✓ 地域差がある



Conclusion

## PEKTまとめ

- ✓ もともと行われていたKRT
- ✓ 1990年台はGS/PSが優れていた
- ✓ 日本においては15-20%がPEKT
- ✓ 種々のメリットがある
- ✓ 増加のためには患者、医療者の啓発が必要
- ✓ 献腎ドナーの爆発的な増加に期待

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2013.7.14

ご静聴ありがとうございました

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千葉博基、川口愛、大石悠一郎、横口はるか

各病院の腎臓内科、内科、小児科の皆様

第5回 集中セミナー

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