



第36回沖縄県人工透析研究会
March 11, 2018



沖縄県の腎移植の現況 (2017年12月31日までのまとめ)

¹ 琉球大学 大学院医学研究科 腎泌尿器外科学講座

² 中部徳洲会病院 泌尿器科

○木村 隆¹ 大城 吉則² 斎藤 誠一¹

沖縄県の腎移植データ提供施設



沖縄県の腎移植を施行した施設(2017)



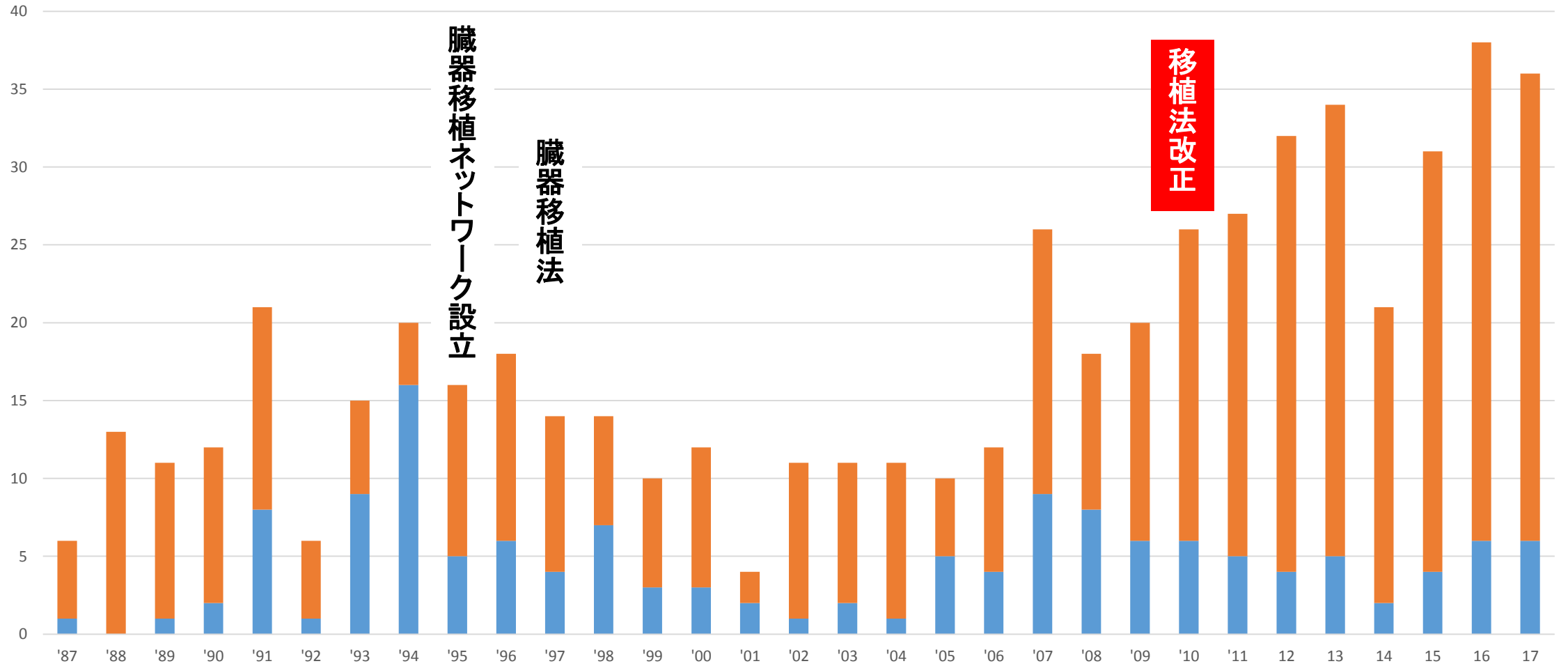
沖縄県の腎移植症例(2017年)

全36例	生体腎移植	献腎移植
症例(例)	30	6
男性(例)	19	6
女性(例)	11	0
年齢(歳)	45.6 ± 14.9 (22 - 68)	53.5 ± 11.0 (39 - 68)
平均透析期間(年)	3.9 ± 5.3 (0 - 19.0)	15.1 ± 4.6 (10.2 - 21.4)

沖縄県の腎移植症例

1987年～2017年12月31日まで

(人)



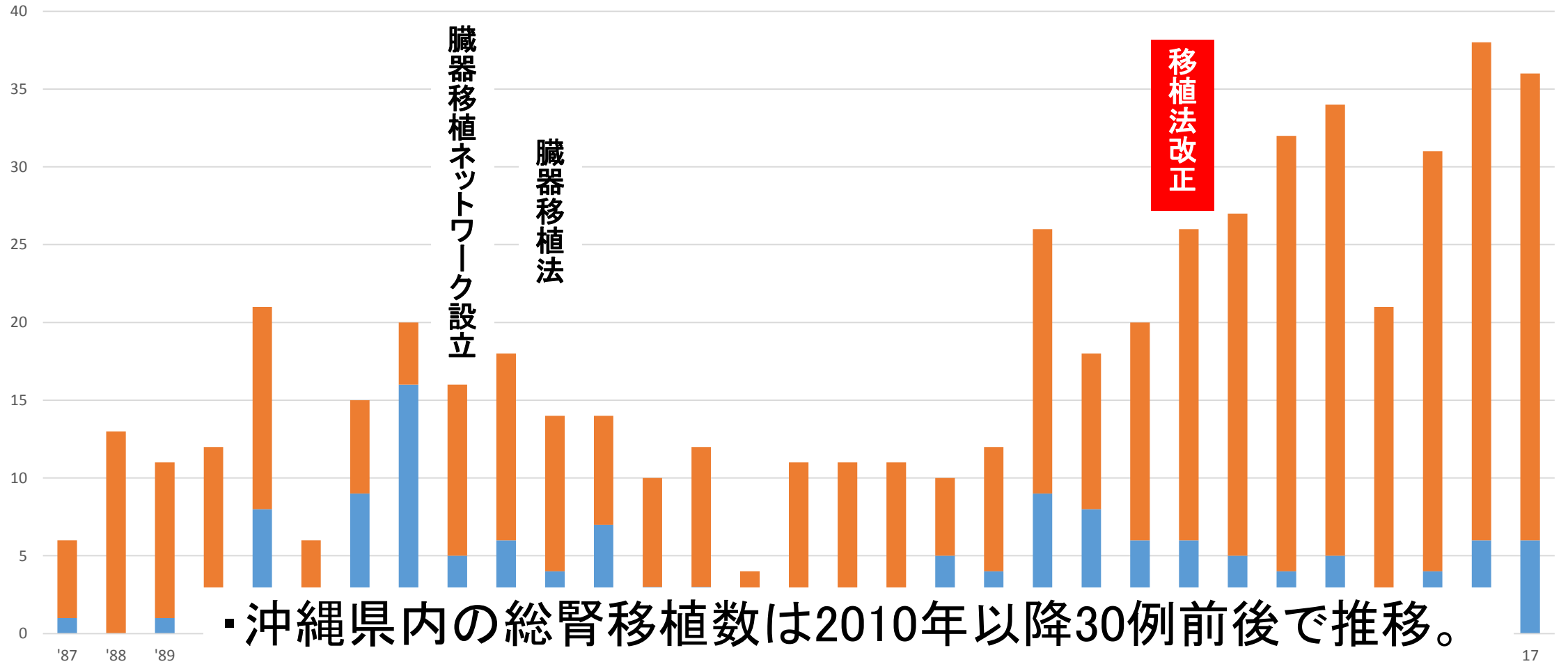
■ 献腎 142例 ■ 生体腎 414例

(年)

沖縄県の腎移植症例

1987年～2017年12月31日まで

(人)



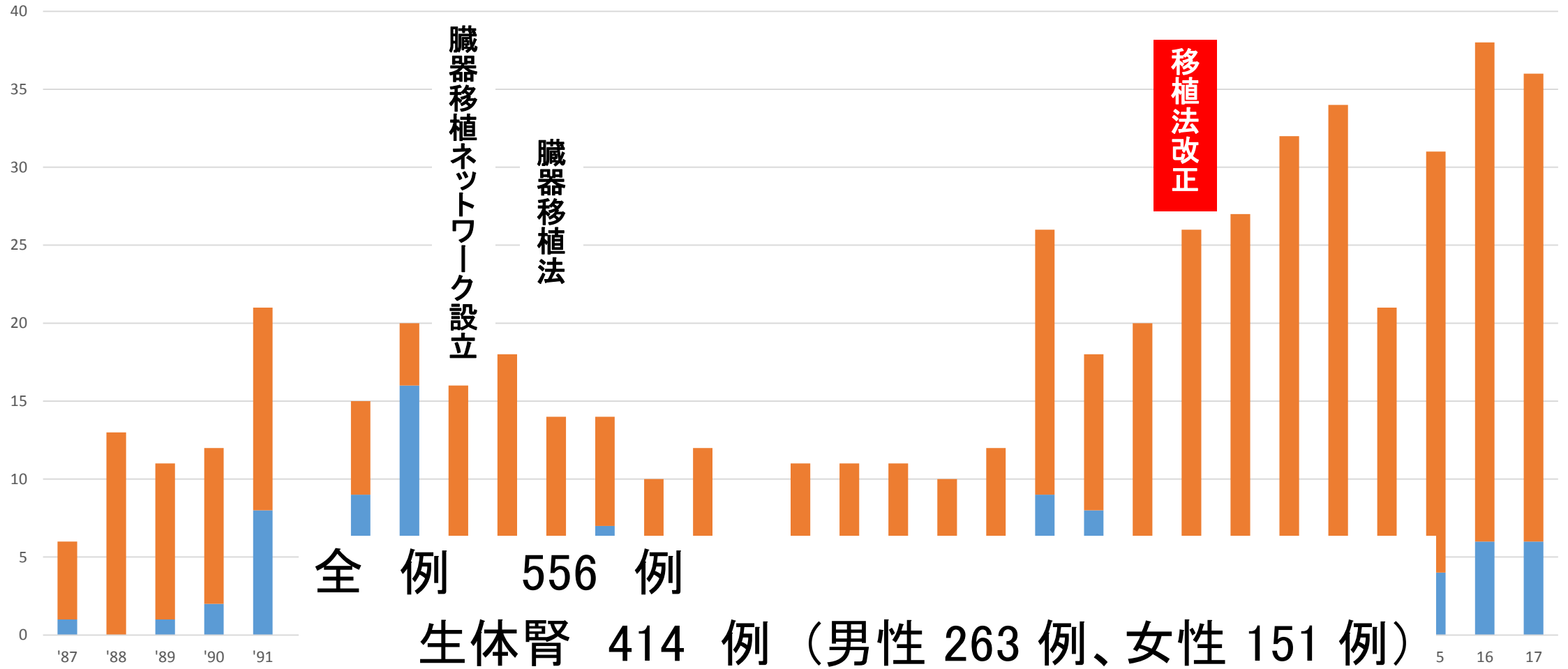
- ・沖縄県内の総腎移植数は2010年以降30例前後で推移。
- ・この2年は35症例以上であり増加傾向にある。
- ・献腎移植数は横ばいであり、生体腎移植が増加傾向。

17 (年)

沖縄県の腎移植症例

1987年～2017年12月31日まで

(人)



全例 556 例

生体腎 414 例 (男性 263 例、女性 151 例)

献腎 142 例 (男性 94 例、女性 48 例)

(年)

献腎移植までの平均透析期間

移植年	透析期間(年)	症例数
2007	19.2	9
2008	14.3	8
2009	17.3	6
2010	18.9	6
2011	16.2	5
2012	15.7	4
2013	19.8	5
2014	12.9	2
2015	22.1	4
2016	20.3	6
2017	15.1	6

献腎移植レシピエント
(2016)

平均待期期間 14.6年

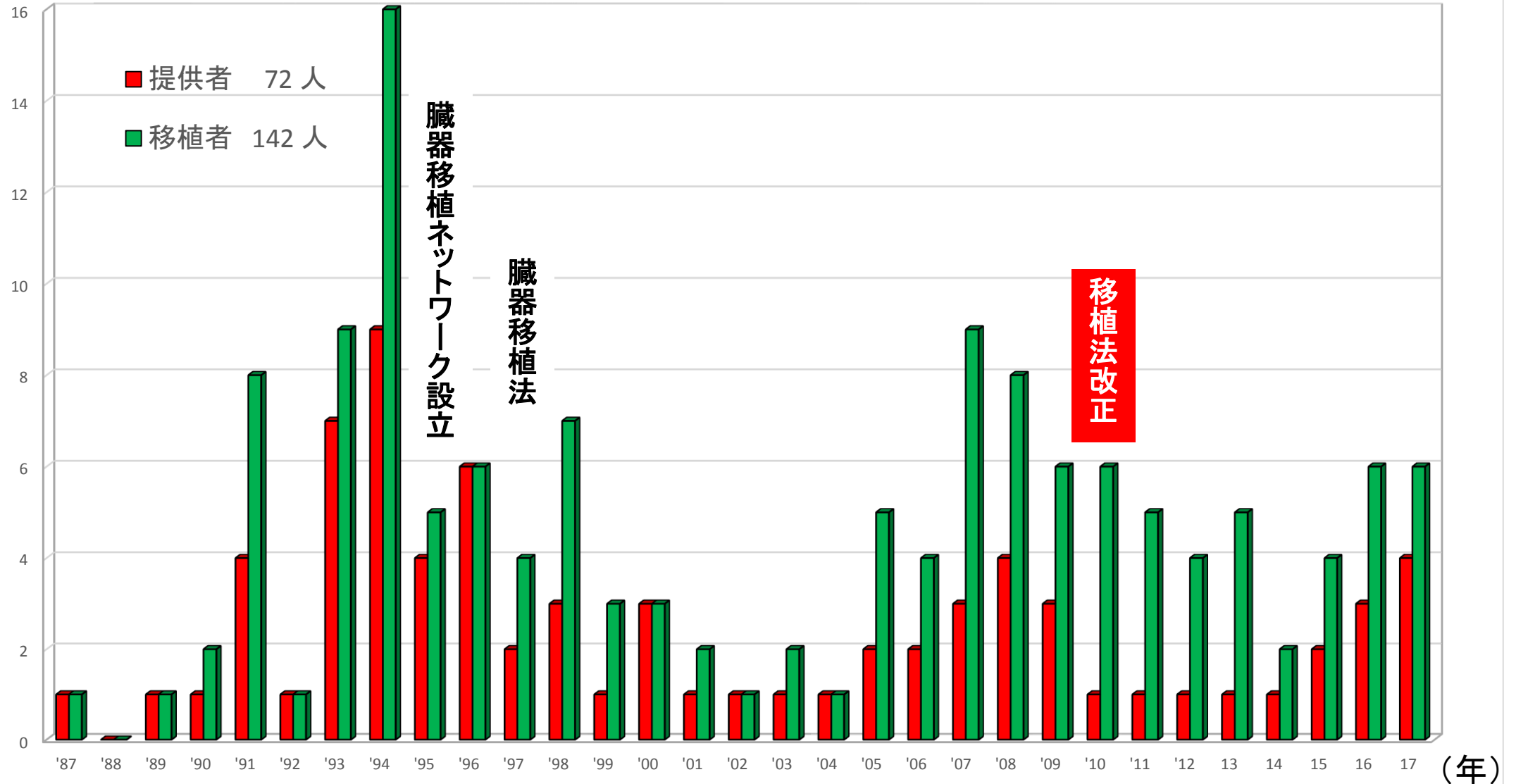
ファクトブック 2016 (日本移植学会)

17.2年

沖縄県献腎提供・移植者数の推移

1987年～2017年12月31日まで

(人)



腎移植レシピエントの原疾患（全556例）

CGN (IgA腎症を含む)	340 (12)	間質性腎炎	5
SLE	31	腎硬化症	14 (1)
低形成腎	15	Goodpasture症候群	2
ネフローゼ	7 (1)	Henoch Scholein	2
DM	45 (3)	後部尿道弁	1
MPGN	10	Alport症候群	2
RPGN	4	VUR	3 (1)
FGS	8 (2)	ANCA関連腎炎	5 (2)
DPGN	2	ミトコンドリア脳筋症	1
嚢胞腎	11 (1)	その他	41 (10)

()は2017年の症例数

生体腎移植ドナー (414 例)

レシピエントとの関係

母親	107 (11)	子供	21
父親	75 (2)	配偶者	118 (10)
兄弟	44 (2)	親戚	5 (1)
姉妹	43 (4)		

()は2017年の症例数

移植腎機能喪失の原因(全例)

1987年～2017年12月31日まで

123 (移植腎喪失例) / 556 (全例) = **22.1%**

慢性拒絶反応	61 (3)	原疾患の再発	5
急性拒絶反応	5	FGS再発	2
Primary NF	7	PTLD	1
死亡	35 (2)	膿腎症	1
静脈血栓症	3	不明	4

()は2017年の症例数

移植腎機能喪失の原因（生体腎・献腎別）

1987年～2017年12月31日まで

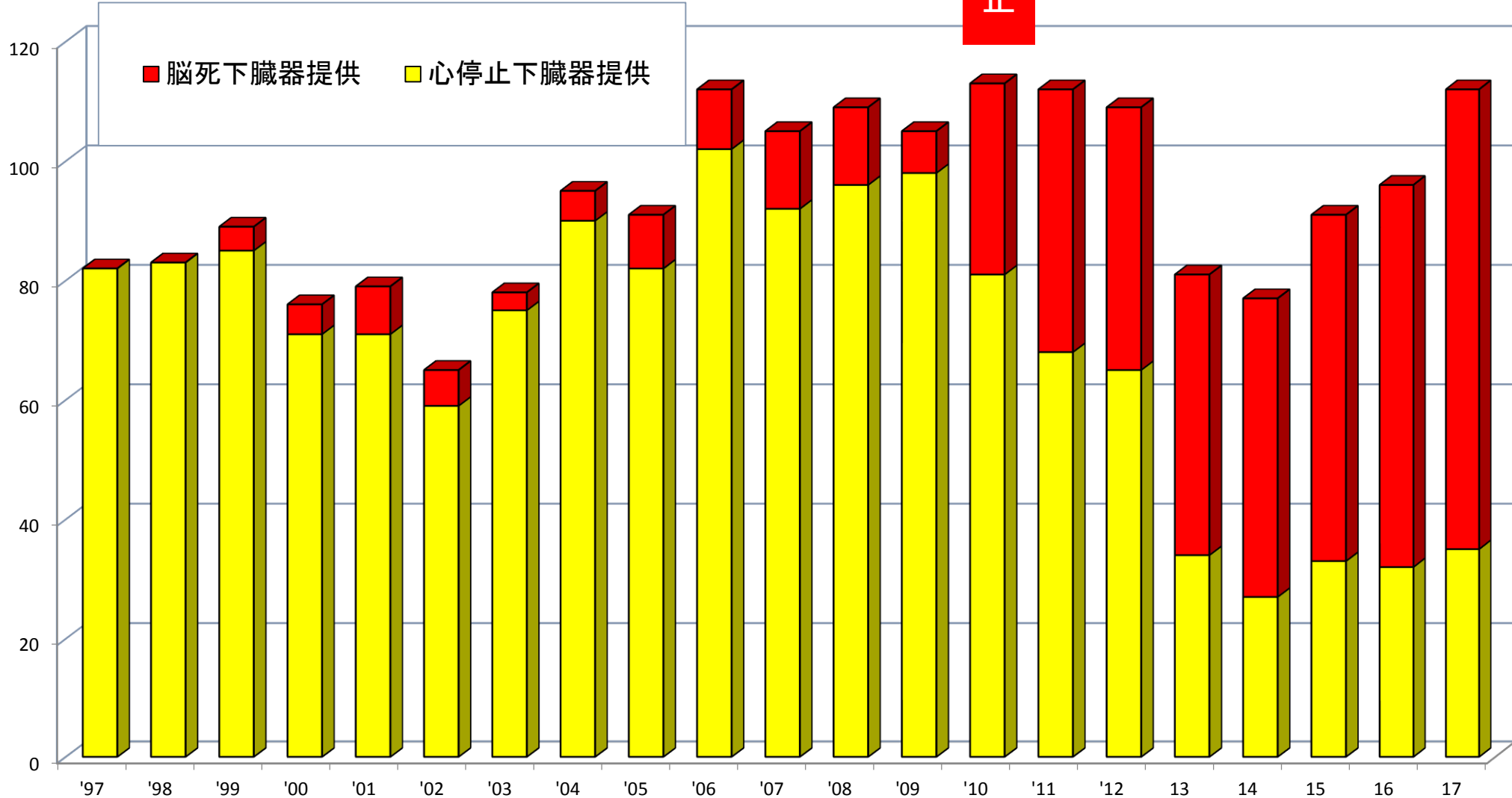
	生体腎	献腎
慢性拒絶反応	48 (3)	13
急性拒絶反応	4	1
Primary NF	1	6
死亡	13 (1)	21 (1)
静脈血栓症	1	1
原疾患の再発	5	0
FGS再発	2	0
PTLD	0	1
膿腎症	1	0

()は2017年の症例数

臓器提供者の動向

移植法改正

(人)

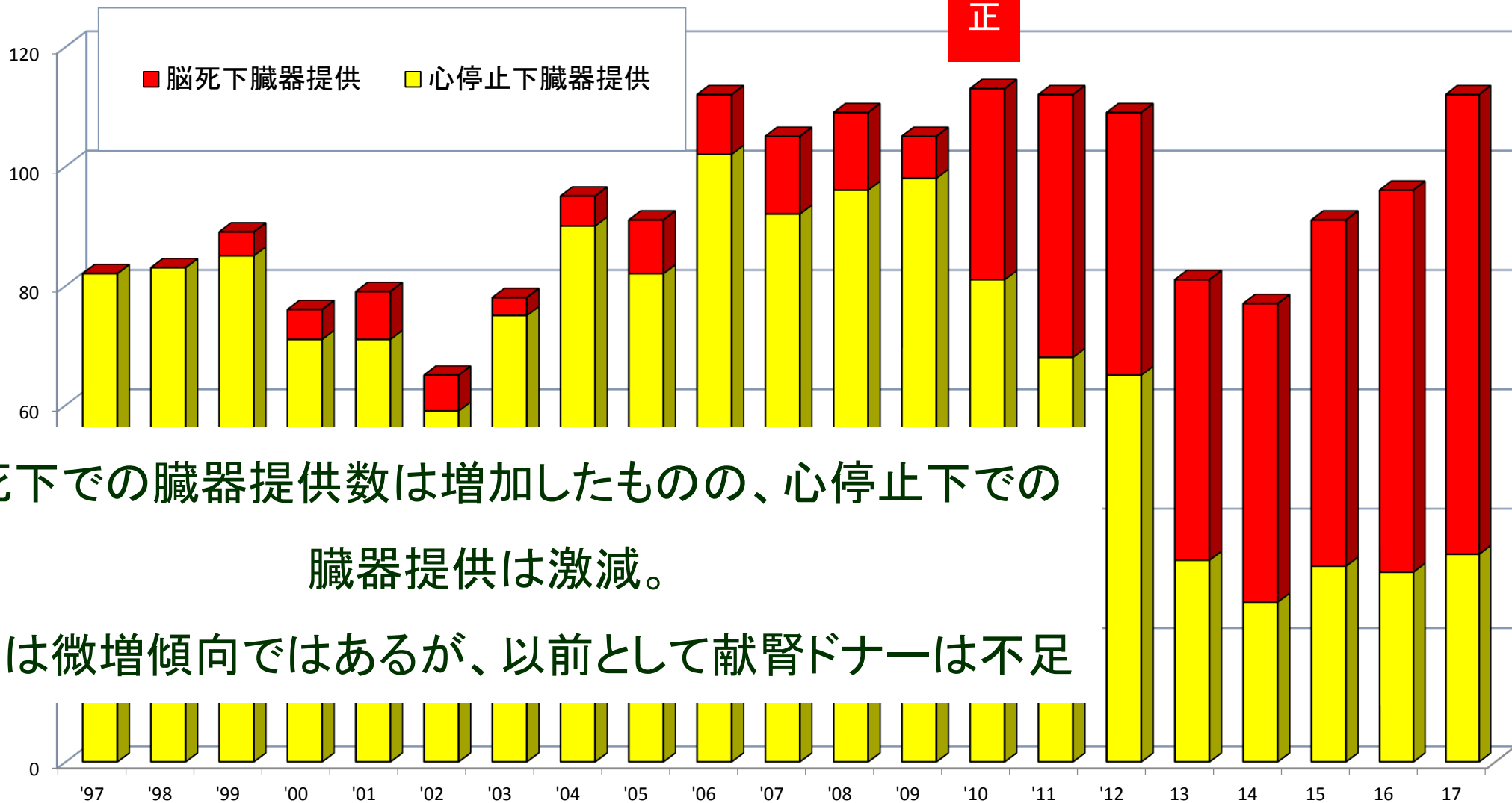


※ 1997年～2017年のデータ

臓器提供者の動向

移植法改正

(人)



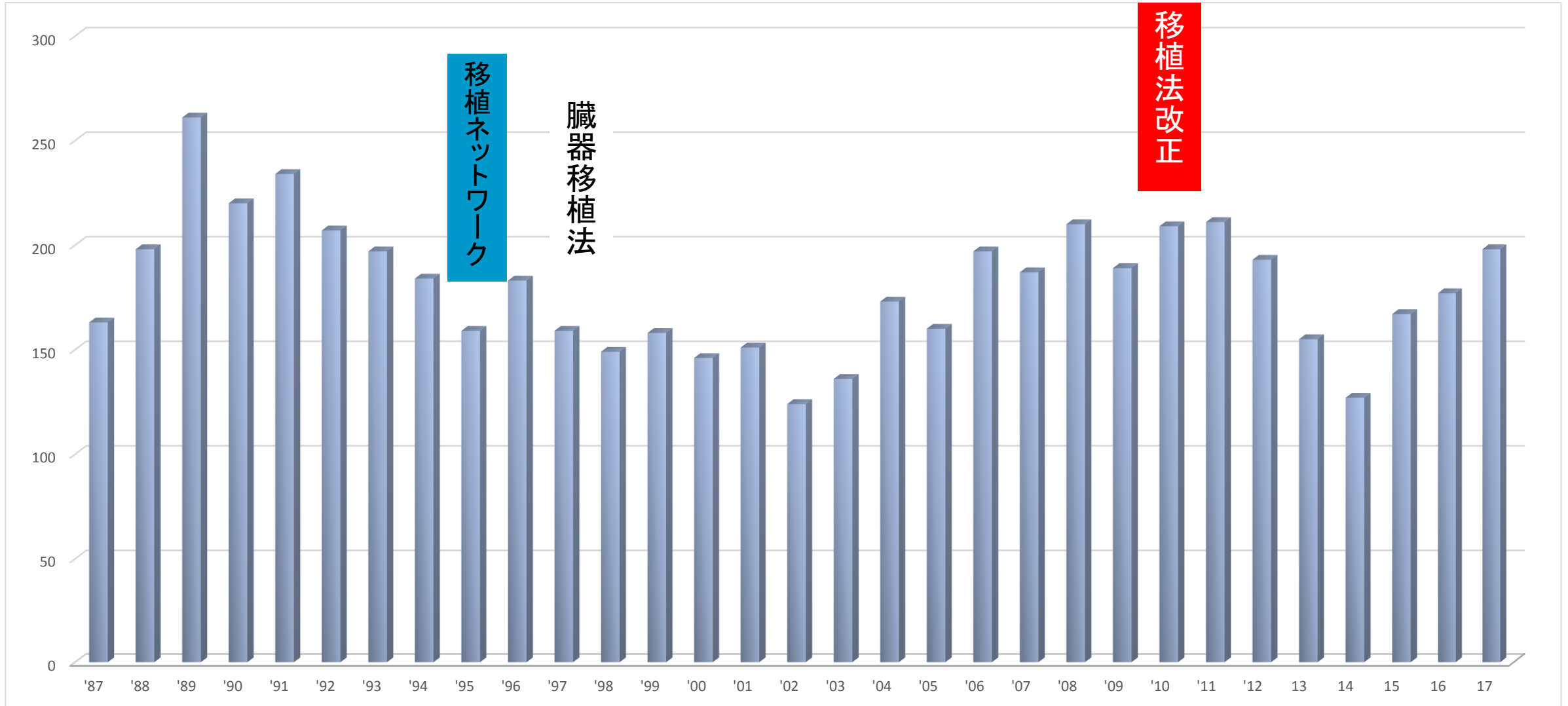
脳死下での臓器提供数は増加したものの、心停止下での臓器提供は激減。

近年は微増傾向ではあるが、以前として献腎ドナーは不足

※ 1997年～2017年のデータ

全国の献腎移植者数の推移

(人)



※ 1987年～2017年のデータ

腎移植における最近の話題

先行的腎移植 (preemptive kidney transplantation: PEKT)

CKD stage IV～Vの状態ですら透析療法を経ずに腎移植手術を行うこと。

意義:

透析に伴う合併症の予防 ⇒ 動脈硬化、骨合併症

QOLの改善 ⇒ 透析療法で制限される社会活動、就業、就学

女性の妊娠

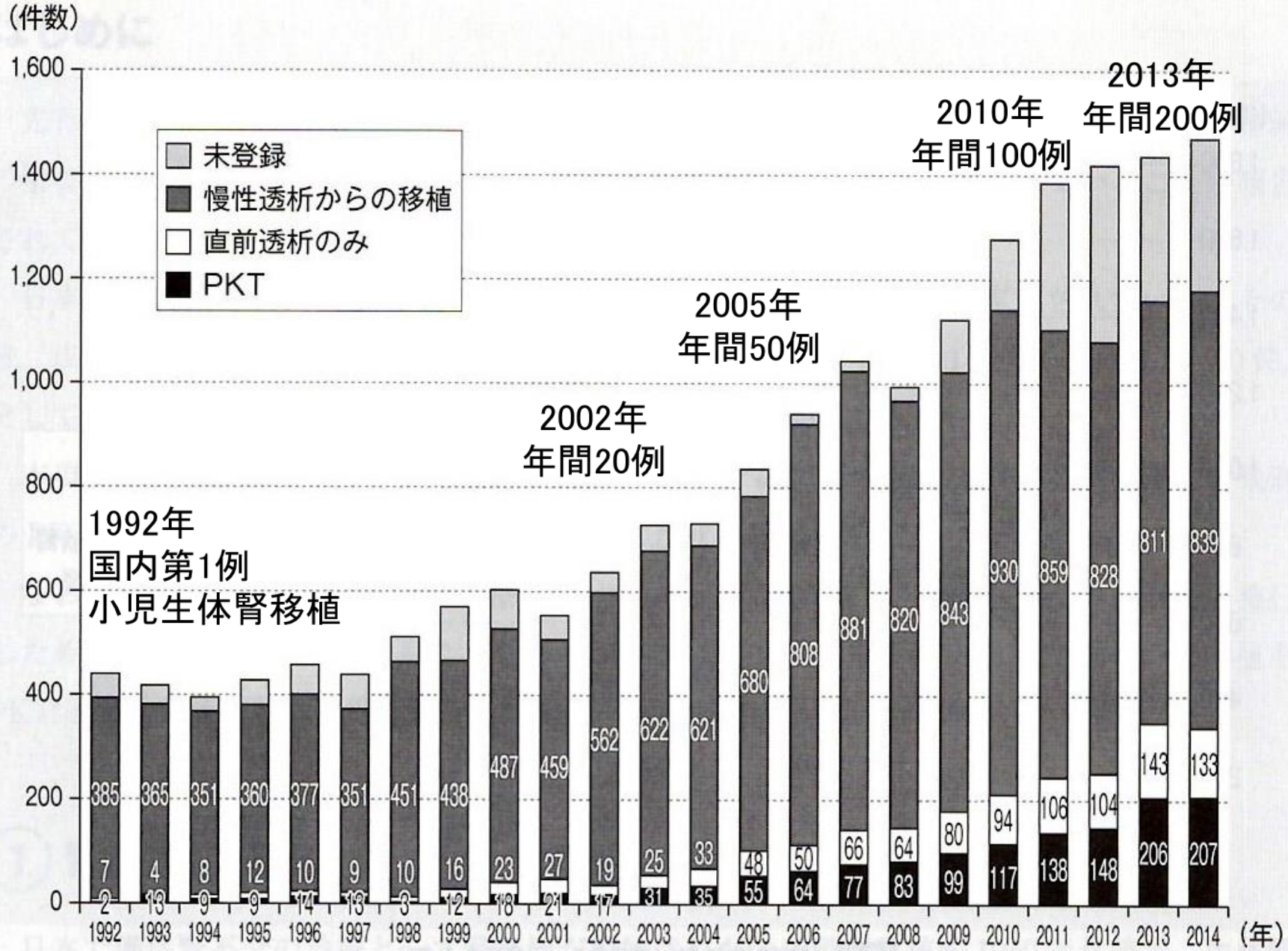
慢性腎不全小児患者の発育の改善

腎移植生成績、生命予後の改善

2017年沖縄県の生体腎移植における 先行的腎移植(PEKT)

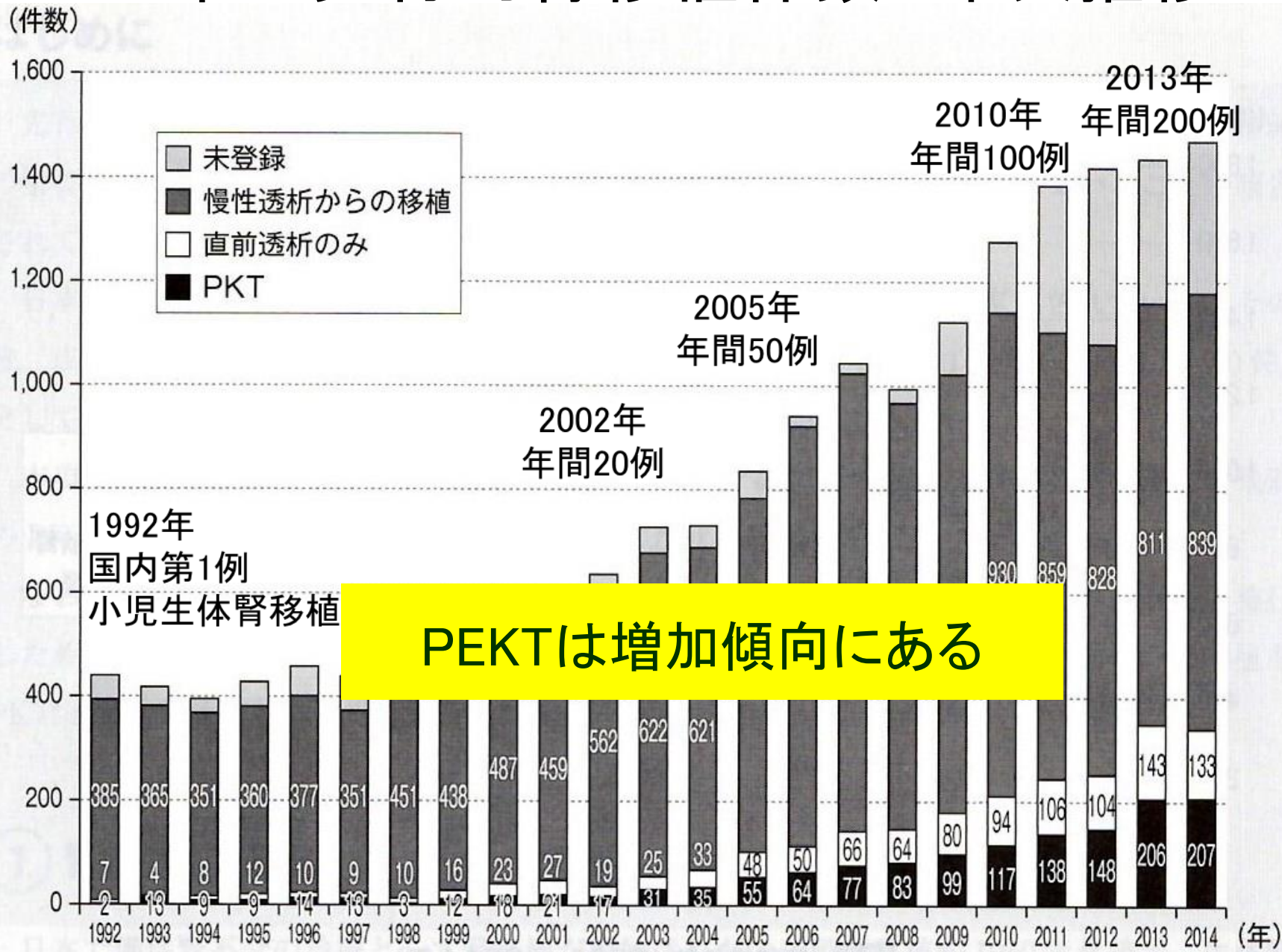
5例 / 30例中 (16.7%)

日本の先行的腎移植件数 年次推移



両角 國男

日本の先行的腎移植件数 年次推移



Association of Dialysis Duration with Outcomes after Transplantation in a Japanese Cohort

Norihiko Goto,* Manabu Okada,* Takayuki Yamamoto,* Makoto Tsujita,* Takahisa Hiramitsu,* Shunji Narumi,* Akio Katayama,[†] Takaaki Kobayashi,[‡] Kazuharu Uchida,[†] and Yoshihiko Watarai*

Abstract

Background and objectives Evidence regarding the differences in clinical outcomes after preemptive kidney transplantation (PKT) and non-PKT in Japan is lacking.

Design, setting, participants, & measurements We conducted a retrospective cohort study at a single center in Japan. Consecutive patients ages >18 years old who had received a kidney transplant from a living donor between November of 2001 and December of 2013 at our institution ($n=786$) were enrolled. The primary study outcome was the occurrence of clinical events before the end of 2014. Clinical events were defined as any of the following: death with functioning graft (DWFG), graft loss, or post-transplant cardiovascular disease (CVD).

Results The median follow-up period was 61.0 (35.3–94.0) months. PKT was performed in 239 patients (30.4%). Clinical events occurred in 78 (9.9%). In the Cox proportional hazard model for univariate analysis, factors found to be associated with higher risk of clinical events included older age, men, ABO incompatibility, longer dialysis duration, diabetes, pretransplant CVD, and large ventricular mass index. PKT was associated with lower risk. Clinical event rate in patients who received a PKT was 3.3% compared with 10.8%, 11.1%, 10.4%, 10.2%, 16.7%, and 16.2% among patients who were on dialysis for <1, 1 to <2, 2 to <3, 3 to <4, 4 to <5, and ≥ 5 years before transplant, respectively ($P=0.002$). The multivariate analysis showed that ABO incompatibility (hazard ratio [HR], 2.98; 95% confidence interval [95% CI], 1.89 to 4.71), duration of dialysis per year (HR, 1.07; 95% CI, 1.03 to 1.11), and diabetes (HR, 3.54; 95% CI, 2.05 to 6.12) were only three independent risk factors for the incidence of clinical events.

Conclusions Even in Japan, where the long-term outcomes of patients on hemodialysis are excellent, PKT could be beneficial to reduce DWFG, graft loss, and post-transplant CVD.

Clin J Am Soc Nephrol 11: 497–504, 2016. doi: 10.2215/CJN.08670815

*Department of Transplant Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Japan;

[†]Department of Transplant Surgery, Masuko Memorial Hospital, Nagoya, Japan; and

[‡]Department of Renal Transplant Surgery, Aichi Medical University School of Medicine, Nagakute, Japan

Correspondence:

Dr. Norihiko Goto, Department of Transplant Surgery, Nagoya Daini Red Cross Hospital, 2-9 Myoken-cho, Showa-ku, Nagoya, 466-8650, Japan. Email: ngoto@nagoya2.jrc.or.jp

Association of Dialysis Duration with Outcomes after Transplantation in a Japanese Cohort

Norihiko Goto,* Manabu Okada,* Takayuki Yamamoto,* Makoto Tsujita,* Takahisa Hiramitsu,* Shunji Narumi,* Akio Katayama,[†] Takaaki Kobayashi,[‡] Kazuharu Uchida,[†] and Yoshihiko Watarai*

Abstract

Background and objectives Evidence regarding the differences in clinical outcomes after preemptive kidney transplantation (PKT) and non-PKT in Japan is lacking.

✓ 腎移植に到るまでの透析期間が短いほど予後良好

✓ PEKTは最も予後がよい

disease (CVD).

Results The median follow-up period was 61.0 (35.3–94.0) months. PKT was performed in 239 patients (30.4%). Clinical events occurred in 78 (9.9%). In the Cox proportional hazard model for univariate analysis, factors found to be associated with higher risk of clinical events included older age, men, ABO incompatibility, longer dialysis duration, diabetes, pretransplant CVD, and large ventricular mass index. PKT was associated with lower risk. Clinical event rate in patients who received a PKT was 3.3% compared with 10.8%, 11.1%, 10.4%, 10.2%, 16.7%, and 16.2% among patients who were on dialysis for <1, 1 to <2, 2 to <3, 3 to <4, 4 to <5, and ≥5 years before transplant, respectively ($P=0.002$). The multivariate analysis showed that ABO incompatibility (hazard ratio [HR], 2.98; 95% confidence interval [95% CI], 1.89 to 4.71), duration of dialysis per year (HR, 1.07; 95% CI, 1.03 to 1.11), and diabetes (HR, 3.54; 95% CI, 2.05 to 6.12) were only three independent risk factors for the incidence of clinical events.

Conclusions Even in Japan, where the long-term outcomes of patients on hemodialysis are excellent, PKT could be beneficial to reduce DWFG, graft loss, and post-transplant CVD.

Clin J Am Soc Nephrol 11: 497–504, 2016. doi: 10.2215/CJN.08670815

*Department of Transplant Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Japan; [†]Department of Transplant Surgery, Nagoya Memorial Hospital, Nagoya, Japan; and [‡]Department of Renal Transplant Surgery, Aichi Medical University School of Medicine, Nagakute, Japan

Correspondence: Dr. Norihiko Goto, Department of Transplant Surgery, Nagoya Daini Red Cross Hospital, 2-9 Myoken-cho, Showa-ku, Nagoya, 466-8650, Japan. Email: ngoto@nagoya2.jrc.or.jp

Correspondence: Dr. Norihiko Goto, Department of Transplant Surgery, Nagoya Daini Red Cross Hospital, 2-9 Myoken-cho, Showa-ku, Nagoya, 466-8650, Japan. Email: ngoto@nagoya2.jrc.or.jp

PEKTは、腎代替療法として推奨される。