

小児心臓移植におけるドナー年齢の影響について (文献まとめ)

**Donors' characteristics and impact on outcomes in pediatric heart transplant recipients**

(Conway J, Chin C, Kemma M, et al. *Pediatric Transplant* 2013; 17:774-781)

低年齢ではドナー年齢の影響はないが、10 歳以上の小児への心臓移植で、ドナー年齢を 20 歳未満、と 20 歳以上に分けると、有意に 20 歳以上の方が早期死亡が多い。保存時間が長くなると、その影響は大きくなる

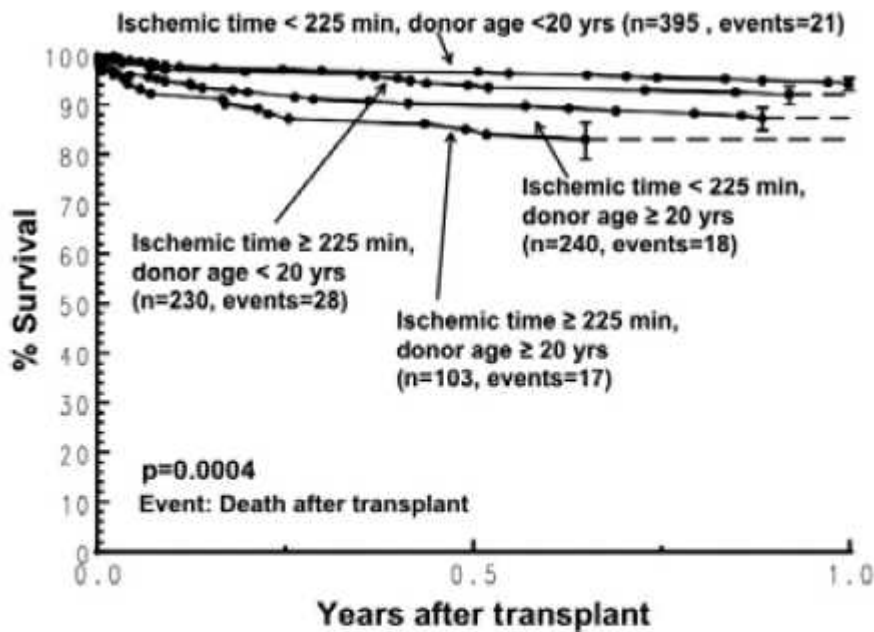


Fig. 5. Kaplan-Meier survival curve examining the interaction of donor age and ischemic time on survival in the first-yr post-transplant in recipients ≥10 yr of age (Pediatric Heart Transplant Registry data 1993-2009).

## Predictors of cardiac allograft vasculopathy in pediatric heart transplant recipients

(Kobayashi D, Du W, L'Ecuyer TJ. *Pediatr Transplantation* 2013; 17: 436–440 )

ドナー年齢は、移植心冠動脈硬化発生のリスク因子である

Table 4. Univariate analysis of CAV risk factors

Variable	HR	95% CI	p-Value
Recipient age (reference: <1 yr)			
1–4 yr	1.32	1.10–1.59	0.0031
5–9 yr	1.65	1.34–2.01	<0.0001
10–18 yr	2.29	1.97–2.67	<0.0001
Donor age (reference: <1 yr)			
1–4 yr	1.43	1.17–1.73	0.0004
5–9 yr	1.44	1.16–1.78	0.0008
10–18 yr	2.28	1.88–2.77	<0.0001
>18 yr	3.14	2.57–3.83	<0.0001
Diagnosis – re-transplant	3.22	2.10–4.93	<0.0001
Recipient race – black	1.70	1.44–1.93	<0.0001
Recent PRA >10%	1.20	1.03–1.39	0.0194
Peak PRA >10%	1.27	1.10–1.47	0.0012
Recipient diabetes	3.42	1.63–7.21	0.0012
Donor alcohol use	2.52	1.88–3.38	<0.0001
Donor cigarette use	2.53	2.03–3.15	<0.0001
Early rejection (<1 yr)	1.69	1.47–1.93	<0.0001
Transplant year after 2000	1.31	1.14–1.51	<0.0001

# Pediatric heart allocation and transplantation in Eurotransplant

Smits JM, Thul J, De Pauw M

(Transplant International ISSN 0934-0874)

Eurotransplant では、小児ドナーは小児レシピエントに提供するルールとなっている

**Table 1.** Overview of pediatric heart allocation policies.

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August 23, 2000—Start of the high urgent (HU) heart allocation scheme	
Priority for pediatric donor:recipient pair	Hearts from donors <16 years are first allocated to HTx candidates <16 years within each urgency tier, first high urgent, then urgent, then elective
Pediatric status	HT candidate <16 years at time of organ offer
Pediatric HU status	<45 kg or Admitted to an ICU and CI <2.2 l/min/m <sup>2</sup> and SV02 < 55% and PCWP ≥10 mmHg, while on IV inotropes therapy for at least 48 h; and signs of beginning secondary organ failure or Life threatening complications while on assist device
September 1, 2005- Introduction of the urgent (U) status	
Pediatric U status	Admitted to the hospital and on Continuous IV inotropes therapy or Documented intractable recurrent ventricular rhythm disorders or End-stage transplant vasculopathy or Persistant angina pectoris or Assisted device complications
April 23, 2011—Medical definition of a pediatric status	
Pediatric status	HTx candidate <16 years at time of organ offer or still in maturation proven by X-ray of left hand
Pediatric HU status	HTx candidates with a pediatric status, where the hospitalized children are prioritized. The U status is abolished.
ABO blood group incompatibility	HTx candidates under 2 years, from authorized centers, are selected for the match in case of ABO blood group incompatible heart offers

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HT, heart transplants; HU, high urgent.

## 6.5 Heart Allocation Classifications and Rankings

(出典 : Organ Procurement and Transplantation Network (OPTN) Policies)

アメリカ (UNOS) では、日本のレシピエント選択基準と同様に、ドナーが 18 歳未満の場合、同じ Status では、18 歳未満のレシピエントが 18 歳以上のレシピエントより優先されることになっている。

### 6.5.D Allocation of Hearts from Donors Less Than 18 Years Old

Allocation of Hearts from Donors Less Than 18 Years Old Classification	Candidates that are within the:	And are:
1	OPO's DSA or Zone A	<b>Pediatric status 1A</b> and primary blood type match with the donor
2	OPO's DSA or Zone A	<b>Pediatric status 1A</b> and secondary blood type match with the donor
3	OPO's DSA	Adult status 1A and primary blood type match with the donor
4	OPO's DSA	Adult status 1A and secondary blood type match with the donor
5	OPO's DSA or Zone A	<b>Pediatric status 1B</b> and primary blood type match with the donor
6	OPO's DSA or Zone A	<b>Pediatric Status 1B</b> and secondary blood type match with the donor
7	OPO's DSA	Adult Status 1B and primary blood type match with the donor
8	OPO's DSA	Adult Status 1B and secondary blood type match with the donor
9	Zone A	Adult Status 1A and primary blood type match with the donor
10	Zone A	Adult Status 1A and secondary blood type match with the donor
11	Zone A	Adult Status 1B and primary blood type match with the donor
12	Zone A	Adult Status 1B and secondary blood type match with the donor

13	OPO's DSA	<b>Pediatric status 2</b> and primary blood type match with the donor
14	OPO's DSA	<b>Pediatric status 2</b> and secondary blood type match with the donor
15	OPO's DSA	Adult status 2 and primary blood type match with the donor
16	OPO's DSA	Adult status 2 and secondary blood type match with the donor
17	Zone B	Pediatric status 1A and primary blood type match with the donor
18	Zone B	Pediatric status 1A and secondary blood type match with the donor
19	Zone B	Adult status 1A and primary blood type match with the donor
20	Zone B	Adult status 1A and secondary blood type match with the donor
21	Zone B	Pediatric status 1B and primary blood type match with the donor
22	Zone B	Pediatric status 1B, secondary blood type match with the donor
23	Zone B	Adult status 1B and primary blood type match with the donor
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