



Current Status of Heart transplantation; In Iran and in the world

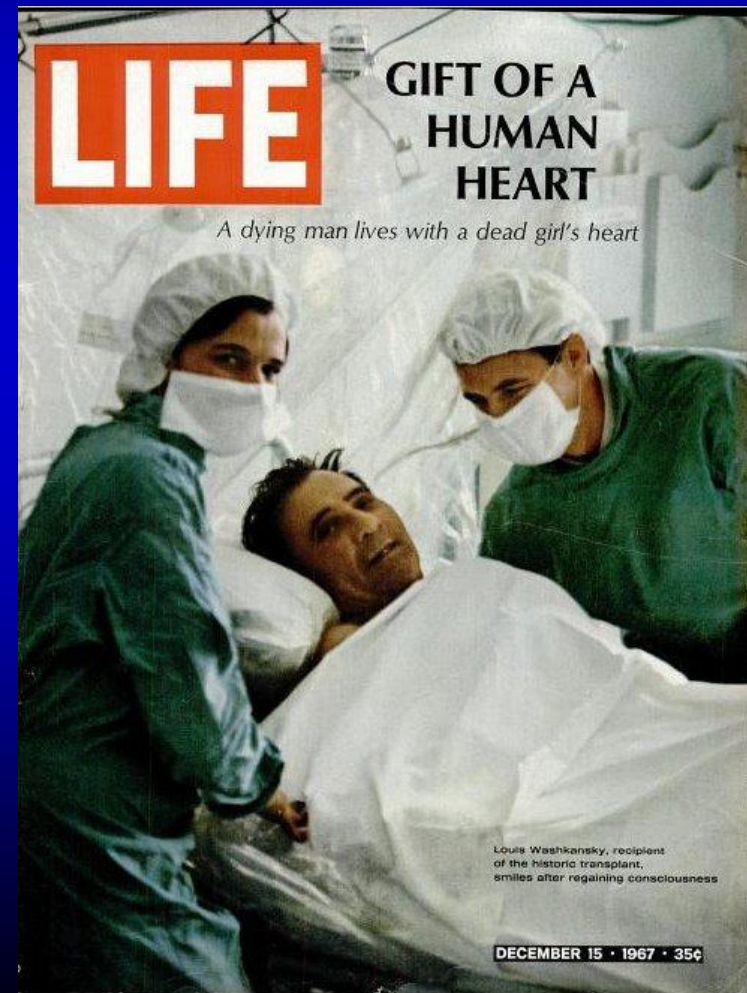
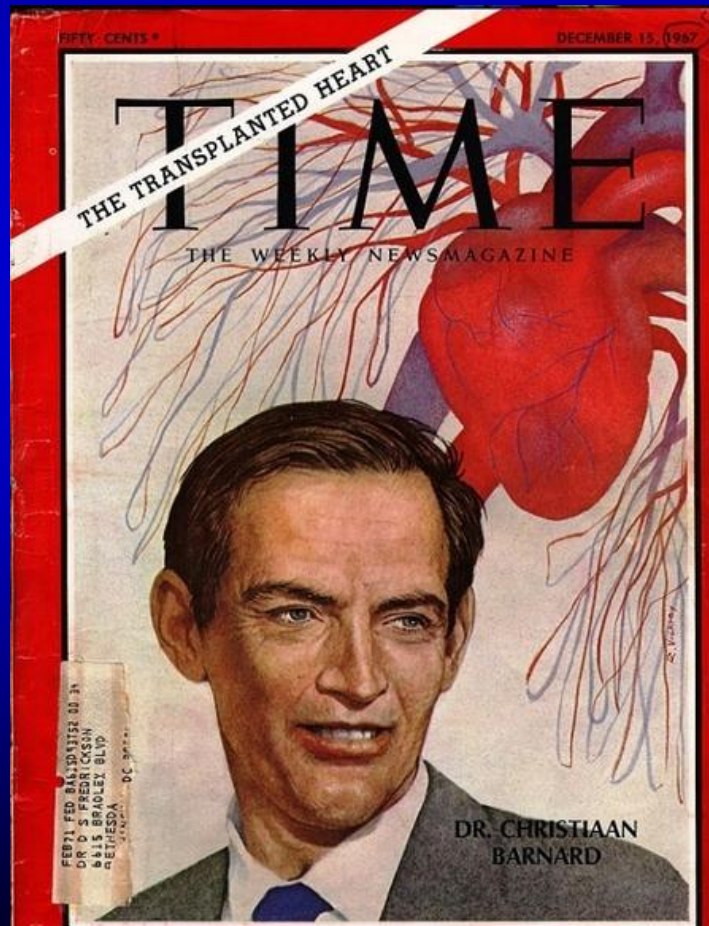
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Cardiac Surgeon,
Associate Professor of Surgery,
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Masih Daneshvari Medical Center (NRITLD),
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The First Heart Transplantation in the world: 1967





Heart Transplant was an important part in the history of Medicine





Heart Transplant was an important part in the history of Medicine



Moments in History

In December, 1967, a young woman, Denise Darvall, was walking across a street in Woodstock to buy a cake when a car struck her. She died in Groote Schuur Hospital and in doing so achieved immortality by becoming the world's first heart donor when Christianus Naethling Barnard transferred her heart into the chest of Louis Washkansky.

Cape Town has been witness to many historic moments since the day Van Riebeeck anchored in Table Bay. Few, if any, brought more limelight to the city than the heart transplant. For the surgeon, Dr Barnard, soon to be a household name throughout the world, "the heart is merely a pump". But for those who regarded the heart with love and death, the transplant seemed close to a miracle.

"Mr Louis Washkansky, the 53-year-old Cape Town man whose life is being sustained today by the heart of a dead 25-year-old woman after the world's first successful heart transplant yesterday, is now home in Groote Schuur Hospital and in a satisfactory condition." Monday, 4th December 1967



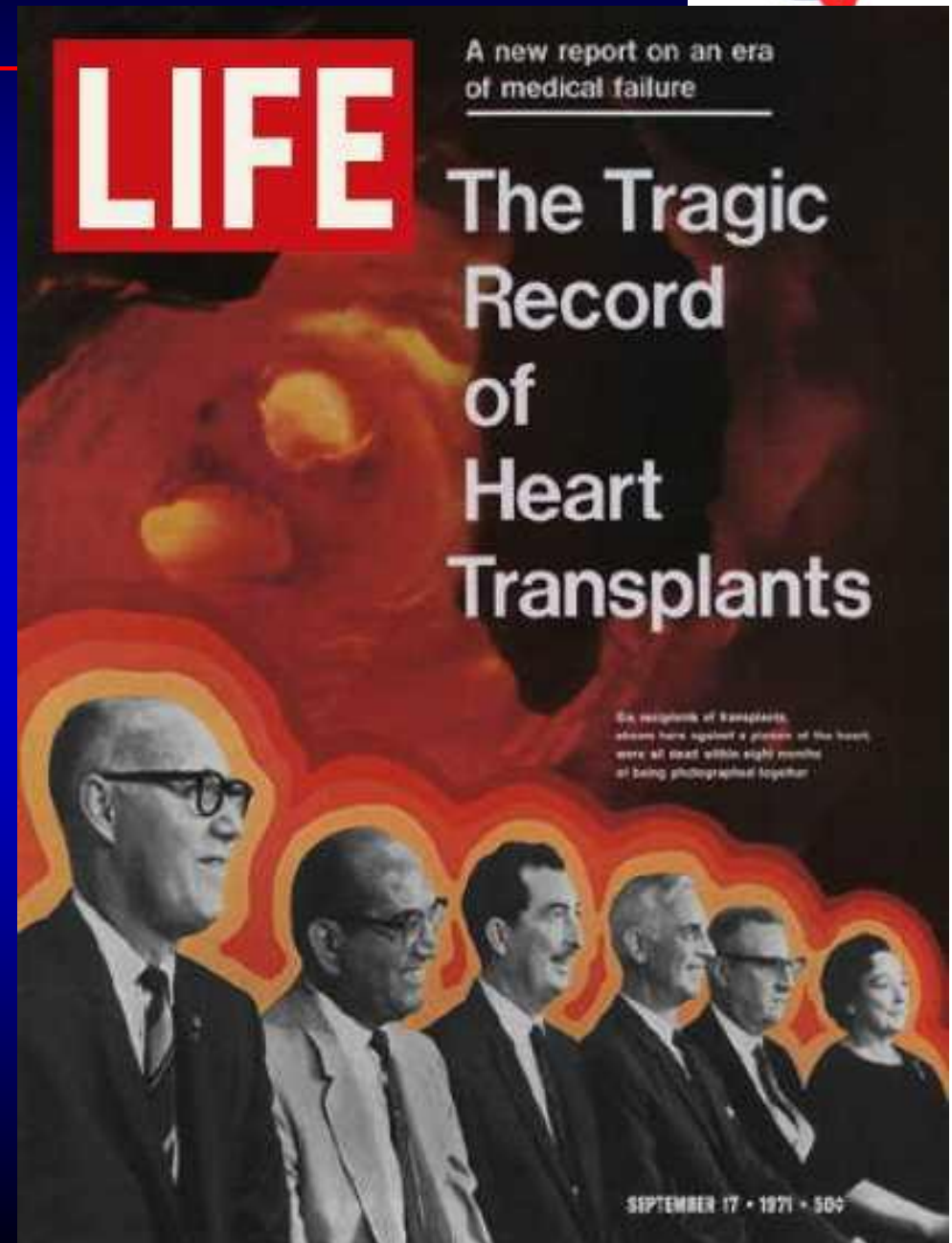
Dr Christianus Naethling Barnard, today of the South African Medical Association, is a 45-year-old man who is now a heart surgeon.



First heart transplant in the world. Dr. Christianus Naethling Barnard, who was assisted by several other doctors, performed the operation on 3 December 1967. The patient, Mr Louis Washkansky, survived for 18 days before dying. The operation was performed in the Groote Schuur Hospital, Cape Town.



Although the Early Results was
Poor,





1960s is a brilliant decade for Macro technology

- 1960: manufacturing modern fighters active and effective for decades



- 1961 First human in the space

- 1969 First human on the moon





But the role of some scientists
were not clarified in the Literature



A Mystery of Vladimir P. Demikhov: The 50th Anniversary of the First Intrathoracic Transplantation

Igor E. Konstantinov, MD

Department of Cardiothoracic Surgery, Linköping Heart Center, University Hospital, Linköping, Sweden

Vladimir P. Demikhov was the first to perform intrathoracic transplantation of the heart alone, lung alone, and the heart and lungs in a warm-blooded animal and the first to perform an experimental coronary artery bypass operation with success. He designed the first mechanical cardiac substitute and was one of the first to use the vascular stapling device in experiments. In 1960 Demikhov published the world's first monograph dealing with the subject of thoracic transplantation. This monograph, *Experimental Transplantation of Vital Organs*, became a

"bible of intrathoracic transplantation" and deserves the recognition of everyone who is interested in organ transplantation. However, to say only that Demikhov was the first in the world who performed these operations is to say nothing. It is important to describe the circumstances under which these operations were done to appreciate the true scale of his innovations.

(Ann Thorac Surg 1998;65:1171-7)

© 1998 by The Society of Thoracic Surgeons



But the role of some scientists were not clarified in the Literature

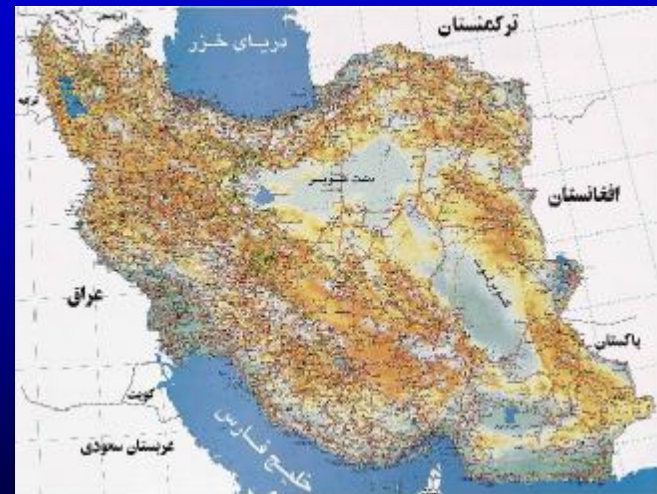


First operations in the World made by Demichov:

- 1937** - The first artificial heart
- 1946** - The first Heterotopic heart transplantation
- 1946** - The first transfer complex heart-lung
- 1947** - The first isolated lung transplantation
- 1948** - The first liver transplantation
- 1951** - The world's first orthotopic heart transplant without the use of cardiopulmonary bypass
- 1952** - The world's first mammarno-coronary bypass surgery (1988 - State Prize)
- 1954** - The first transplant second head dog



End stage Cardiac and Lung disease requiring transplantation is fairly common in our area. The need for organ transplantation is clearly there.





*In Saudi Arabia, the **Senior Ulama** (religion leaders) accepting the concept of brain death and permitting organ transplantation in 1982.*

*[Senior Ulama Commision Decision #99 dated 06-11-1402 H]
(1361-6-9)*



In Iran due to revolution and then 8 year Iraq imposed war against Iran, organ transplant was delayed till 4 April 2000 (17-1-1379) which was Passed by the Iran Parliament.

Then in 15 May 2002 (25-2-1381), the rules was approved by the councils of ministers



Transplantation Milestones In Iran

- 1989 (1367) *First heart transplant: Tabriz*
- 1991 (1369) *Another heart transplant : Shiraz*
- 1993 (1372)
First Successful heart transplant: Tehran

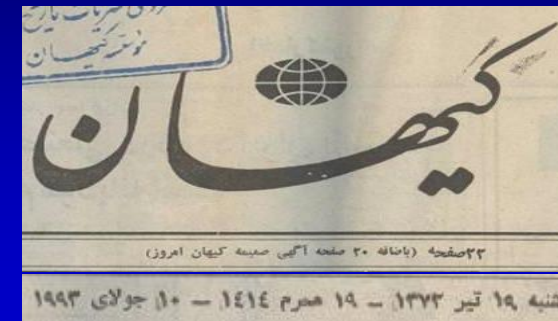




The first Successful heart transplant in Iran...



- Jul. 08, 1993 @ *SHARIATI* General Hospital, *University of Tehran*
- Recipient: 12-yr old, O-, boy with dilated CMP
- Donor: 48-yr old man, iso-ABO & Rh, brain-dead after motor-vehicle accident
- The recipient is now living in good condition





Introduction



- More than **4000 patients** in the United States are registered with the United Organ Sharing Network (UNOS) for cardiac transplantation.
- There are only about **2500 heart donors yearly**.
- Scarcity of donors is complicated by the use of single organs, heart injury with common brain-death injuries, difficulty with ex-vivo preservation, heart disease among donors, and the complexity of the operation.



Unfortunately in our country lack of donors seems to be not an important problem



درصد	تعداد گشته شدگان به نسبت سال قبل	تعداد گشته شدگان سال	سال
		27755	1384
0.6	188	27567	1385
20.2	4649	22918	1386
1.9	444	23362	1387
1.6	388	22974	1388
11.6	2401	20573	1389
2.5	505	20068	1390
5.1	979	19089	1391
6.0	1095	17994	1392
6.6	1122	16872	1393
64	10883	219172	جمع کل



Unfortunately in our country lack of donors seems to be not an important problem



۰۱ : ۰۳ - چهارشنبه ۰۱ اسفند ۱۳۹۷

باشگاه خبرنگاران جوان
بزرگترین خبرگزاری فارسی زبان دنیا

ته فحست سیاسی بین الملل ورزشی اجتماعی اقتصادی فضای مجازی فرهنگی هنری علمی پزشکی فیلم و صوت

شاخص هوای تهران در ۳۰ بهمن ماه/ وضعیت هوای پایتخت سالم -

کد خبر: ۶۵۱۷۱۰۳ گروه: اجتماعی « حوادث و انتظامی تاریخ انتشار: ۰۹ اردیبهشت ۱۳۹۷ »

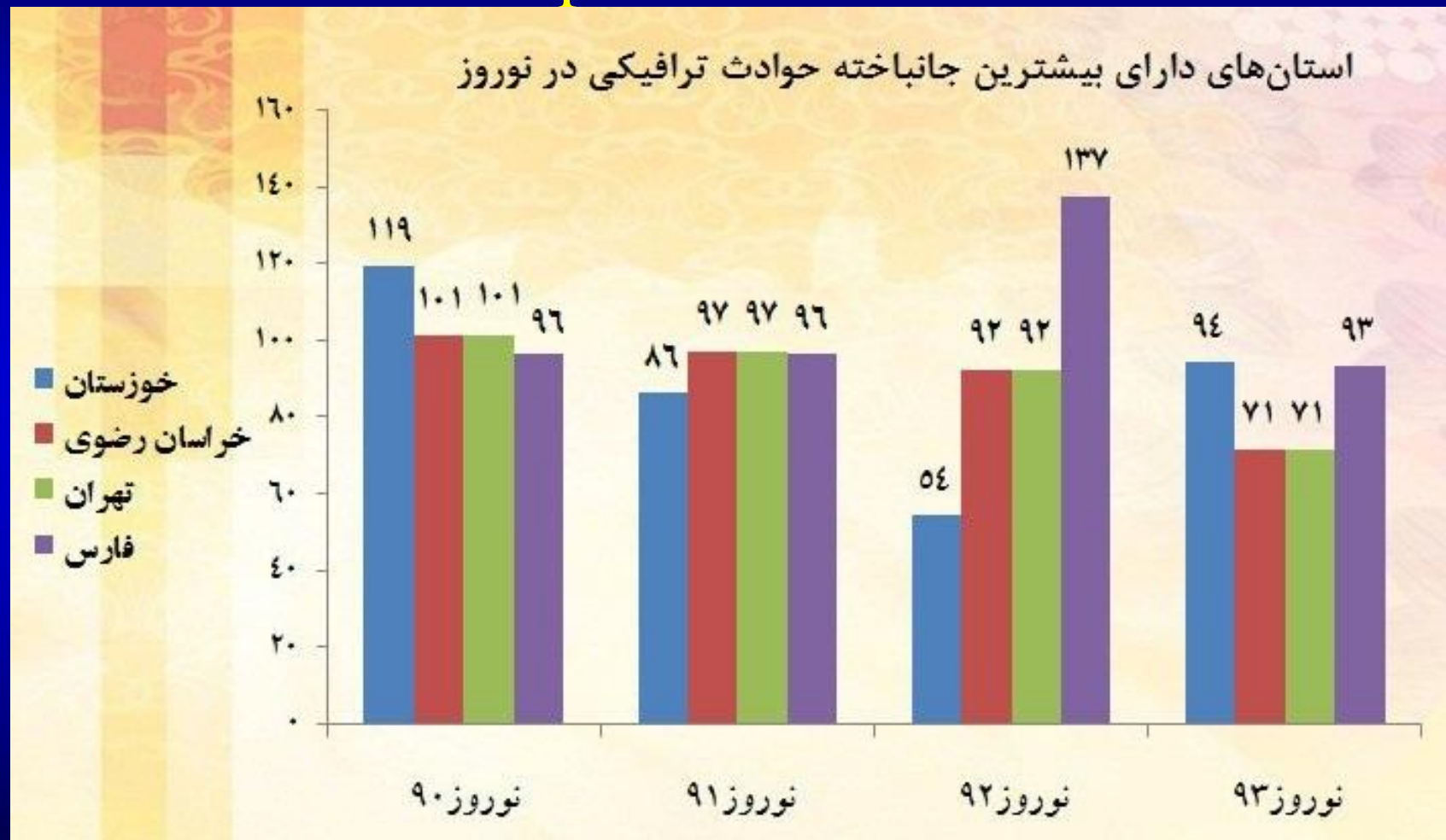
ذخیره ارسال به دوستان نسخه چاپی

آمار نهایی کشته شدگان در تصادفات سال ۹۶ اعلام شد

تعداد کشته شدگان در تصادفات رانندگی سال ۱۳۹۶ نسبت به سال قبل از آن ۱.۷ درصد افزایش یافته است.



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تعداد کشته شدگان در تصادفات رانندگی سال ۱۳۹۶ نسبت به سال قبل از آن ۱۰۷ درصد افزایش یافته است.



The No. of Transplants In Iran till 1396

مراکز فعال پیوند.	
شناسایی و فراهم تری اهداکنندگان مرگ مغزی	
پیوند کلیه: ۲۰	پیوندهای انجام شده از آغاز فعالیت لغایت سال ۱۳۹۶
پیوند کبد: ۷	- پیوند کلیه از اهداکننده زنده: ۳۶۰۳۲
پیوند قلب: ۹	- پیوند کلیه از اهداکننده مرگ مغزی: ۱۰۲۴۷
پیوند ریه: ۳	- پیوند کبد: ۵۵۸۴
پیوند پانکراس: ۴	- پیوند قلب: ۱۰۴۶
پیوند روده: ۱	- پیوند ریه: ۱۵۴
پیوند مغز استخوان: ۱۸	- پیوند پانکراس: ۲۶۱
فراهم تری: ۲۴	- پیوند روده: ۵۴
شناسایی: ۳۰	



Gradual improvement in the rate of donation

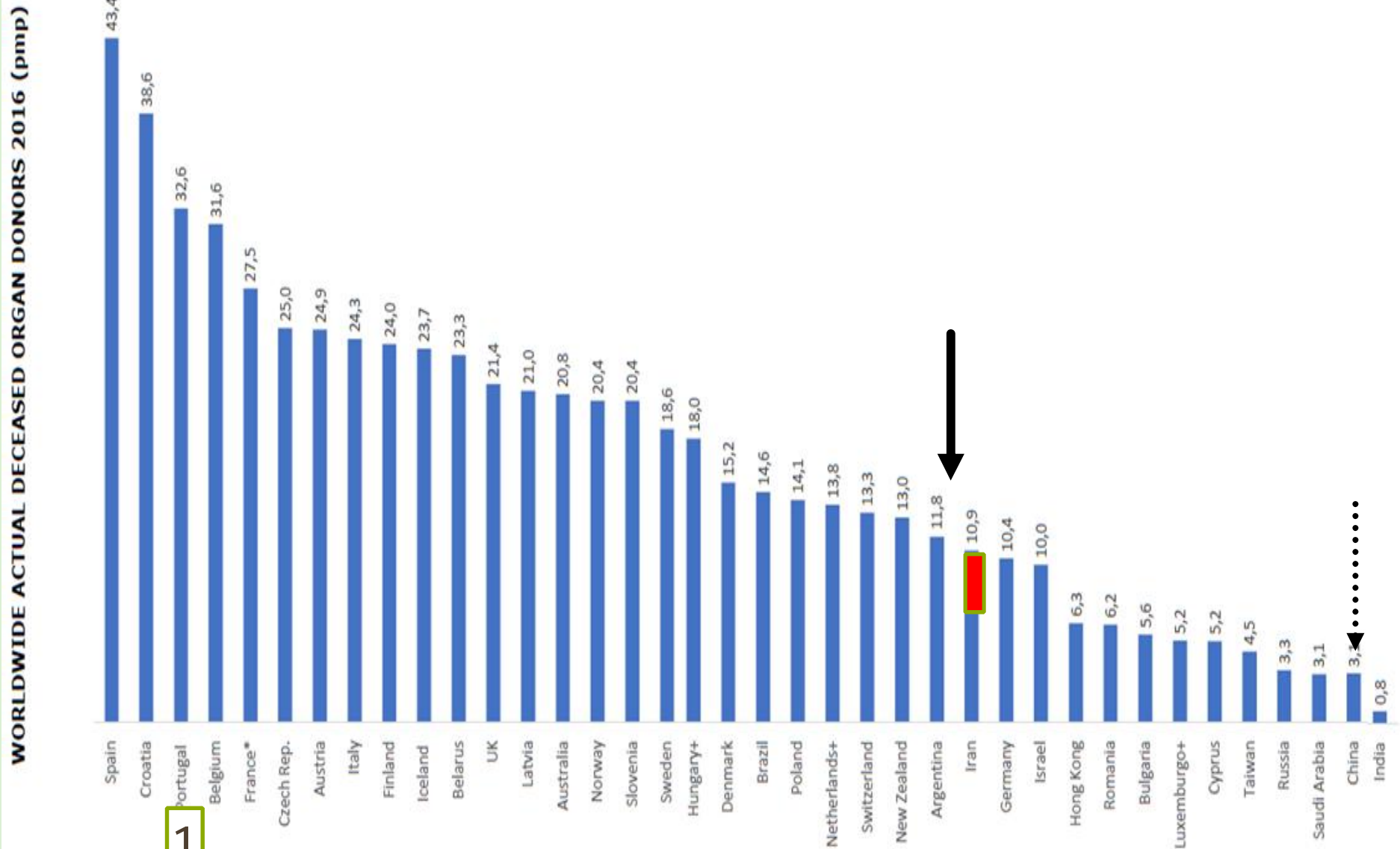


نسبت اهداکنندگان مرگ مغزی به جمعیت (میلیون نفر) در سال (PMP)



THE SITUATION OF ACTUAL DECEASED ORGAN DONATION IN IRAN COMPARED TO THE WORLD IN 2016 (PMP)

(RANK:26)



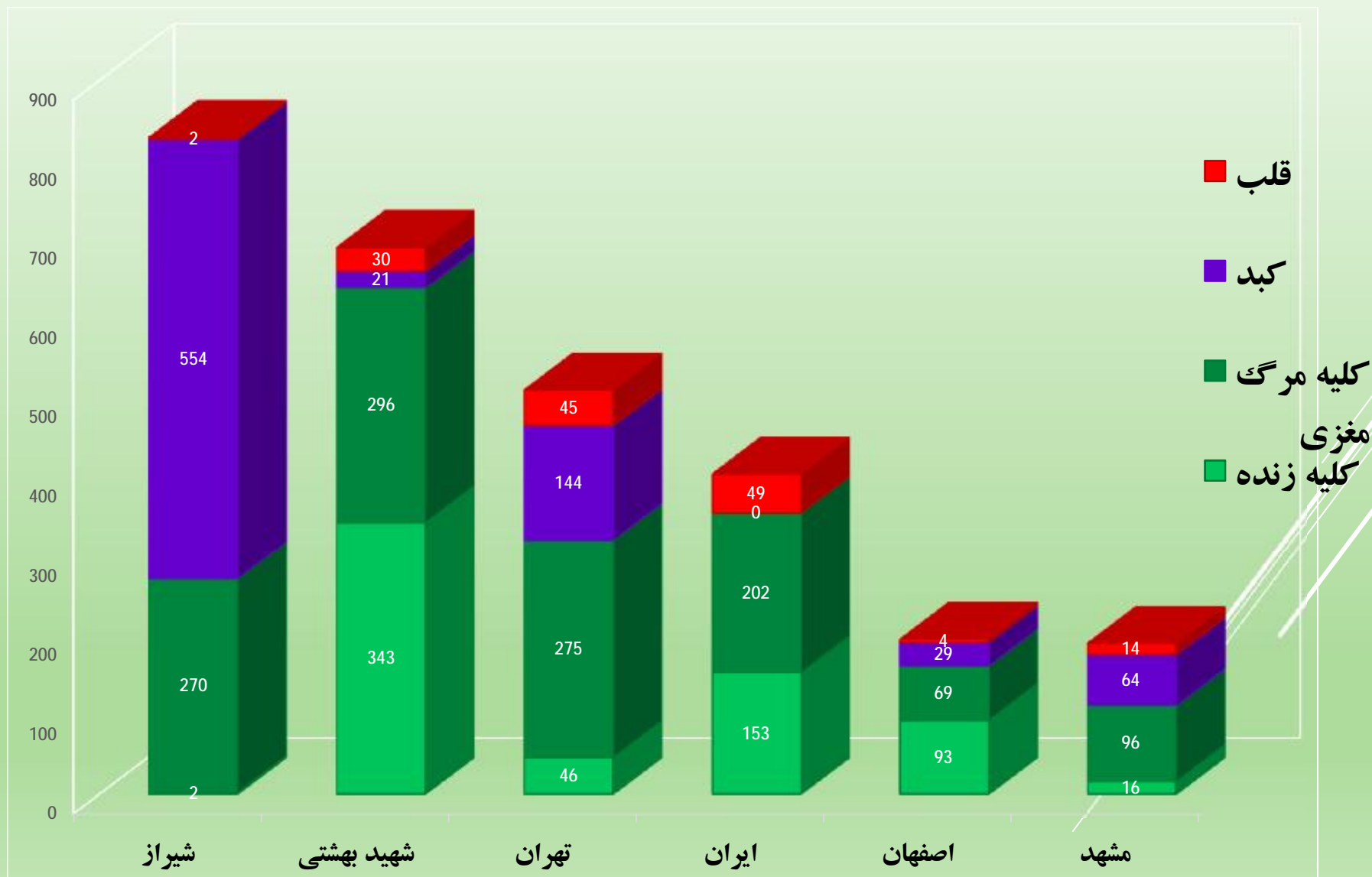
تعداد اهداکنندگان مرگ مغزی از سال 1387 لغایت 1396



تعداد پیوند قلب از سال 1387 لغایت 1396

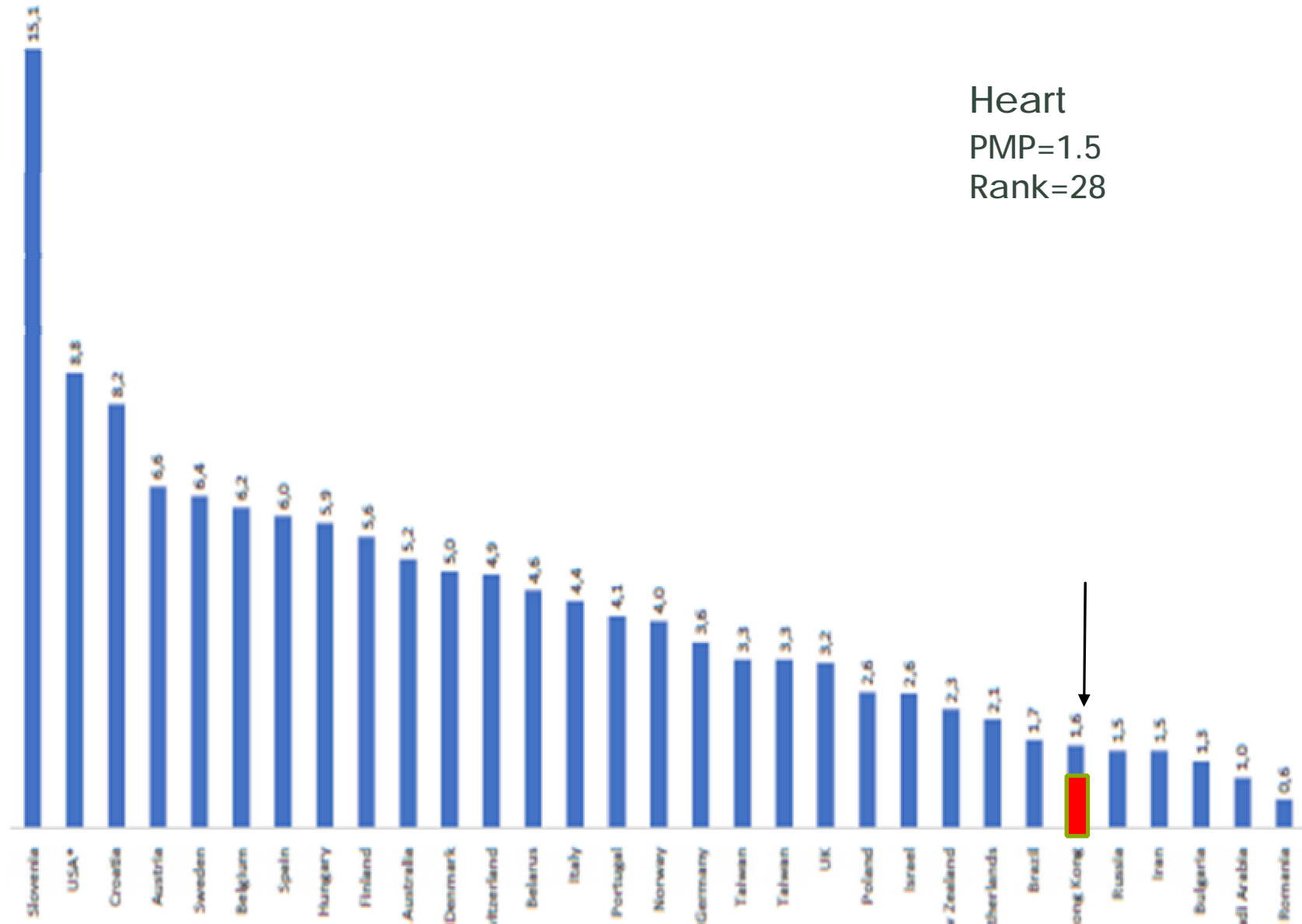


دانشگاههای برتر در زمینه پیوند اعضا به تفکیک عضو پیوندی در سال 1396



transplantations from deceased donors in Iran compared to the world (PMP)

WORLDWIDE HEART TRANSPLANT 2016 (pmp)





Results of Heart Transplantation in Iran



Arch Iranian Med 2009; 12 (2): 111 – 115

Original Article

Heart Transplantation in Iran; A Comprehensive Single-Center Review of 15-Year Performance

Mohammad-Hosseini Mandegar MD***, Jamshid Bagheri MD***, Sam Chitsaz MD**,
Mohammad Jebelli MD***, Daryoosh Javidi MD***, Mahmood-Reza Sarzaeem MD***,
Payam Eghtesadi-Araghi MD**, Jaefar Razavi**, Ali Darehzereshki MD**, Omid Assar MD*



Results of Heart Transplantation in Iran



Mortality and survival

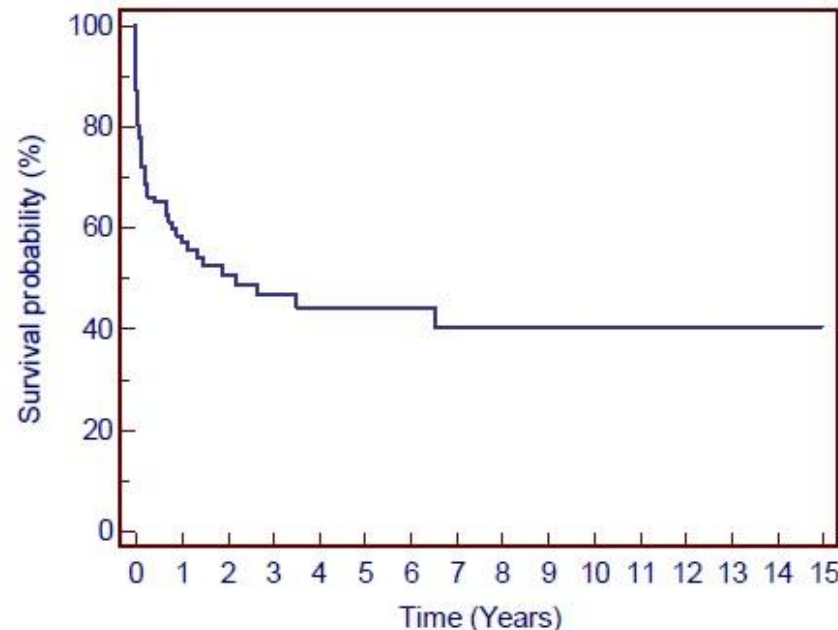
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Heart Trai

Early mortality rate of whole the 15-year period has been 21.1%. However, one-year and five-year survival rates have been $57.1 \pm 5.4\%$ and $40.4 \pm 6.7\%$, respectively (Figure 1).

Single-Center

Mohammad-H
Mohammad Jet
Payam Eghtesadi



um Chitsaz MD^{**},
Sarzaeem MD^{***},
^{**}, Omid Assar MD^{*}



Results of Heart Transplantation in Iran



Mortality and survival

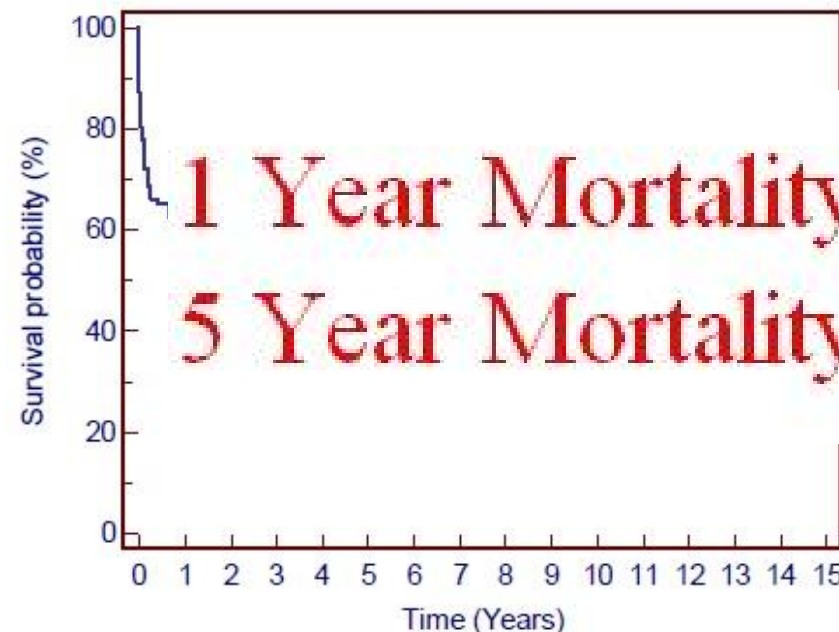
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Heart Transplantation

Early mortality rate of whole the 15-year period has been 21.1%. However, one-year and five-year survival rates have been $57.1 \pm 5.4\%$ and $40.4 \pm 6.7\%$, respectively (Figure 1).

Single-Center

Mohammad-H
Mohammad Jafar
Payam Eghtesadi



1 Year Mortality

5 Year Mortality

Am Chiteaz MD**,
MD***,
Assar MD*

43%

60%



Results of Heart Transplantation in Iran



Annals of Cardiology and Cardiovascular Medicine

Research Article
Published: 16 May, 2017



Heart Transplantation in Iran, a Single Center 15 Years Registry Report, Early and Mid-term Outcomes and Survival Rate

Mehrdad Salehi¹, Ali Reza Bakhshandeh^{1}, Mehrzad Rahmanian¹, Neal Kraus², Jamshid Mirzaei³, Kianoush Saberi⁴, Mahmood Alemohammad⁴, Roya Sattarzadeh⁵ and Anahita Tavoosi⁵*



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Overall mean 1, 3 and 5-years survival rate in our center was $46.6 \pm 28.1\%$, $37.8 \pm 28.8\%$, and $28.5 \pm 25.8\%$ respectively, although overall 1-year survival excluding 30 days hospital mortality was $96.7 \pm 3.3\%$. The 1,3 and 5years survival in the first period (2000-2005)



Results of Heart Transplantation in Iran



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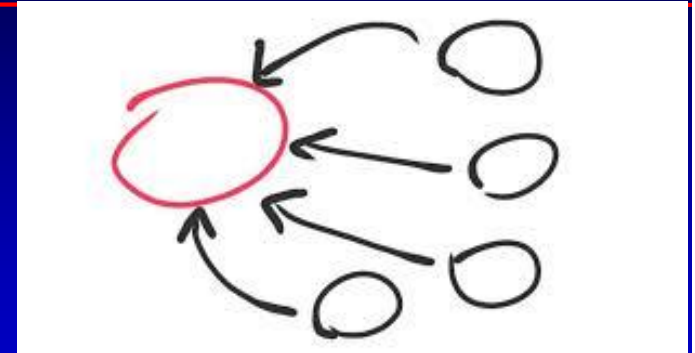
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Overall mean 1, 3	1 Year Mortality	53%	ter was
46.6±28.1%, 37.8±28.8	3 Year Mortality	62%	although
overall 1-year survival	5 Year Mortality	71.5%	lity was
96.7±3.3%. The 1,3 and			10-2005)



Conclusion



- The Number and the mortality of the heart transplant patients is much lower and higher than western countries respectively.
- The main cause is the status 1 patients who are in critical conditions.



Take Home Message



- Limitation of transplant centers to special centers and equipped them seems to be a logic way.
- More information need: But if mortality in other centers is high it may better to operate patients in status II.
- Evoluation is a part of the life. With more work, with confrontation with critical patient and their complications and the results of transplants, our insight and intuition about transplant will also change.



Transplant is like Hiking

















Thank You !