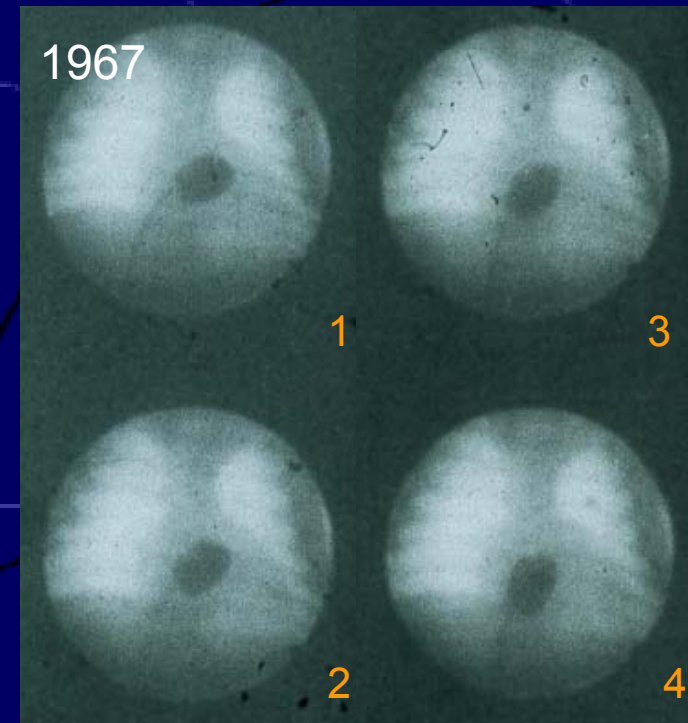
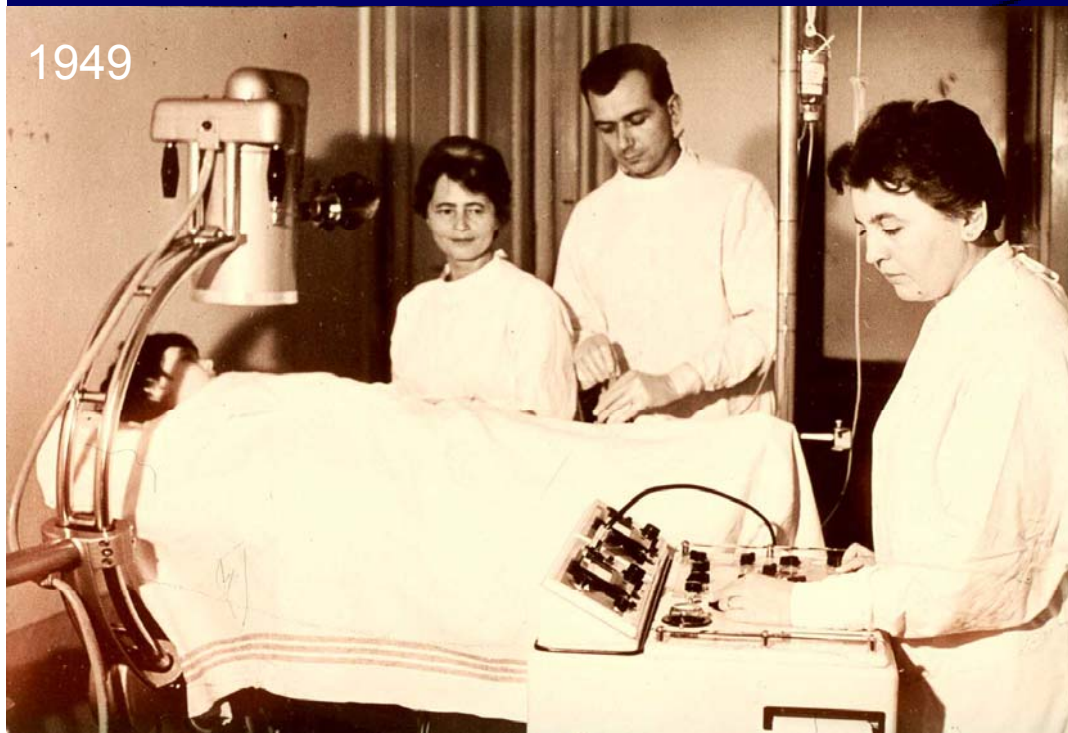


Therapeutic cardiac catheterization in children

P. Tax, O. Reich,
J. Marek, J. Škovránek, S. Tůma, M. Šamánek

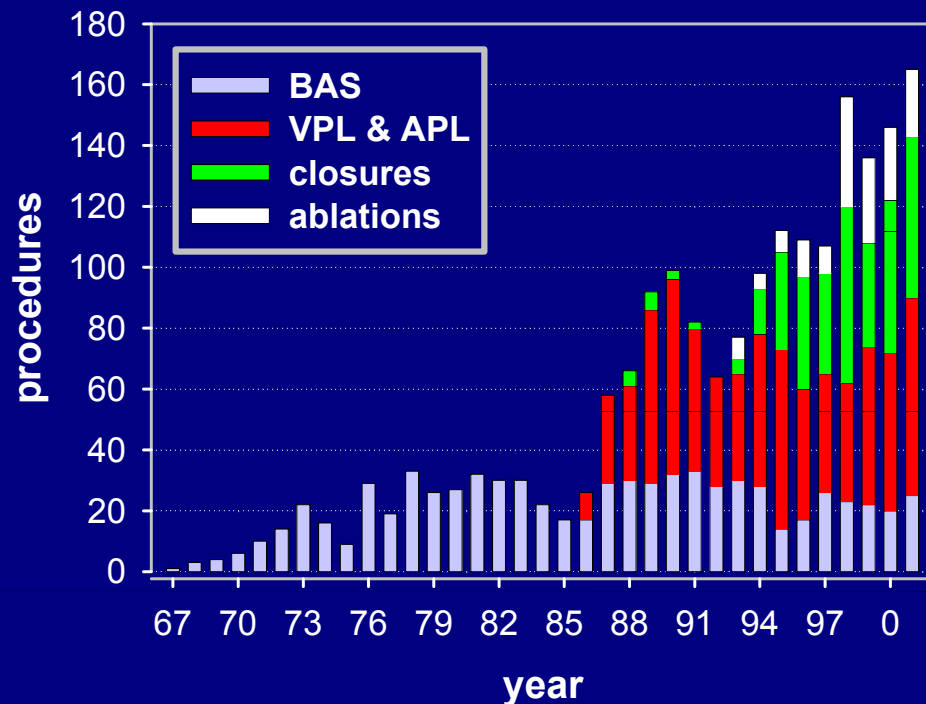


Dětské kardiocentrum, FN Motol, Praha

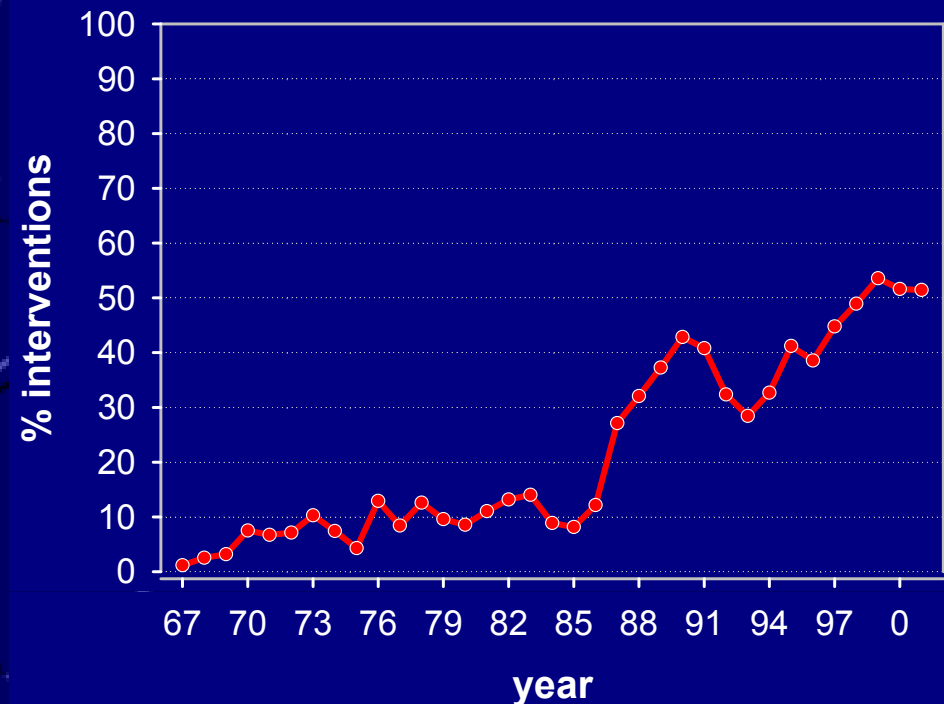
Sponsored by grant IGA MH CR NA/5936-3, 5963-3

Number of Catheter Interventions and their proportion in all Catheterizations

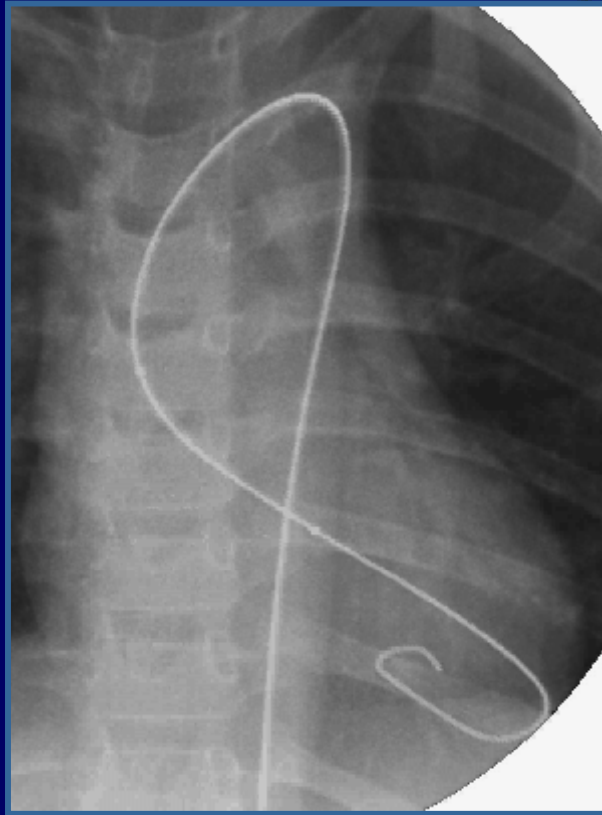
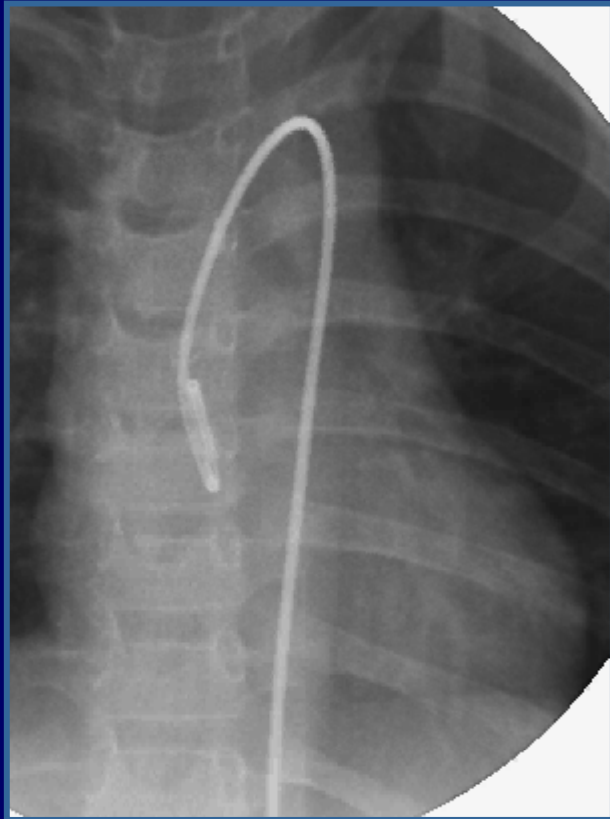
Catheter interventions
1967 - 2001 (N = 1943)



% Interventions from all cath
1967 - 2001 (N = 1943 / 7938)



Aortic Valvuloplasty



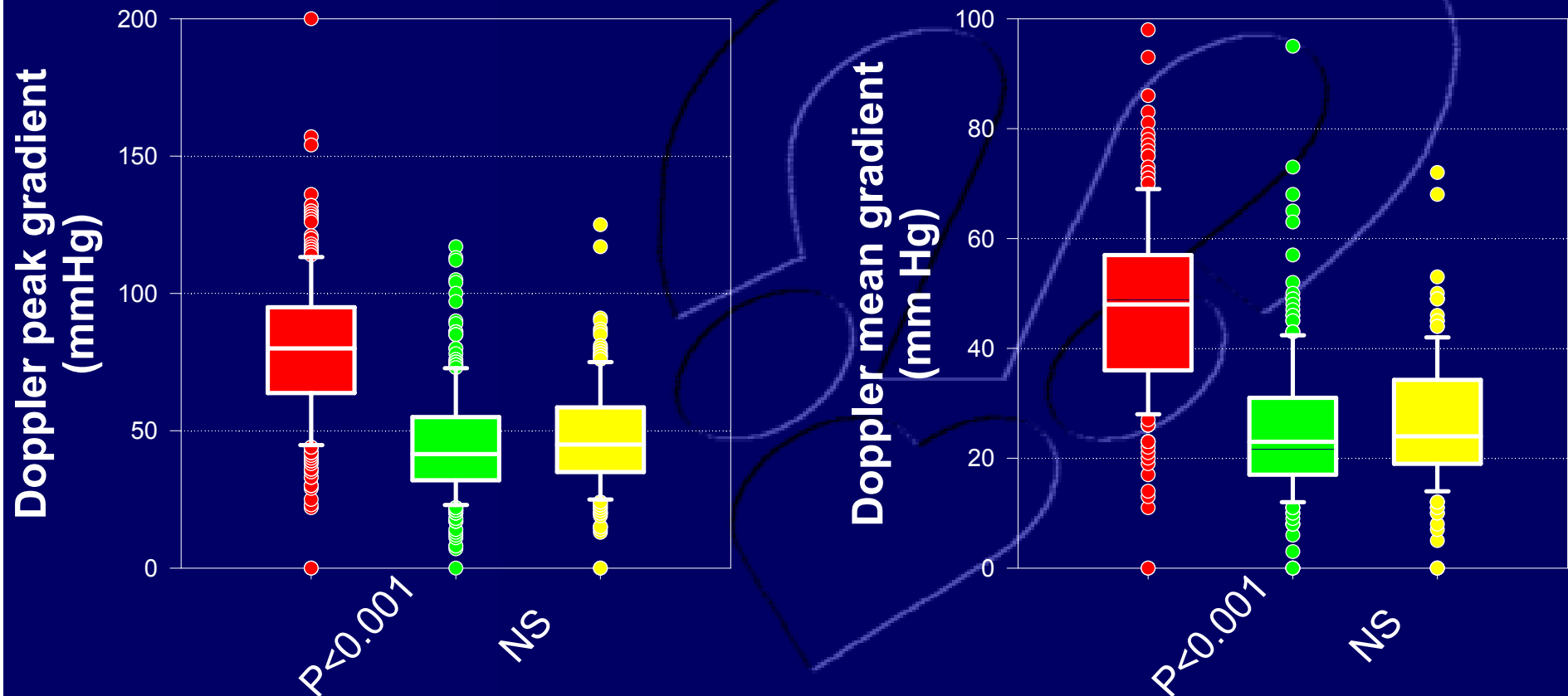
Indications

- critical aortic stenosis
- gradient > 75 mmHg
- syncope, myocardial ischemia

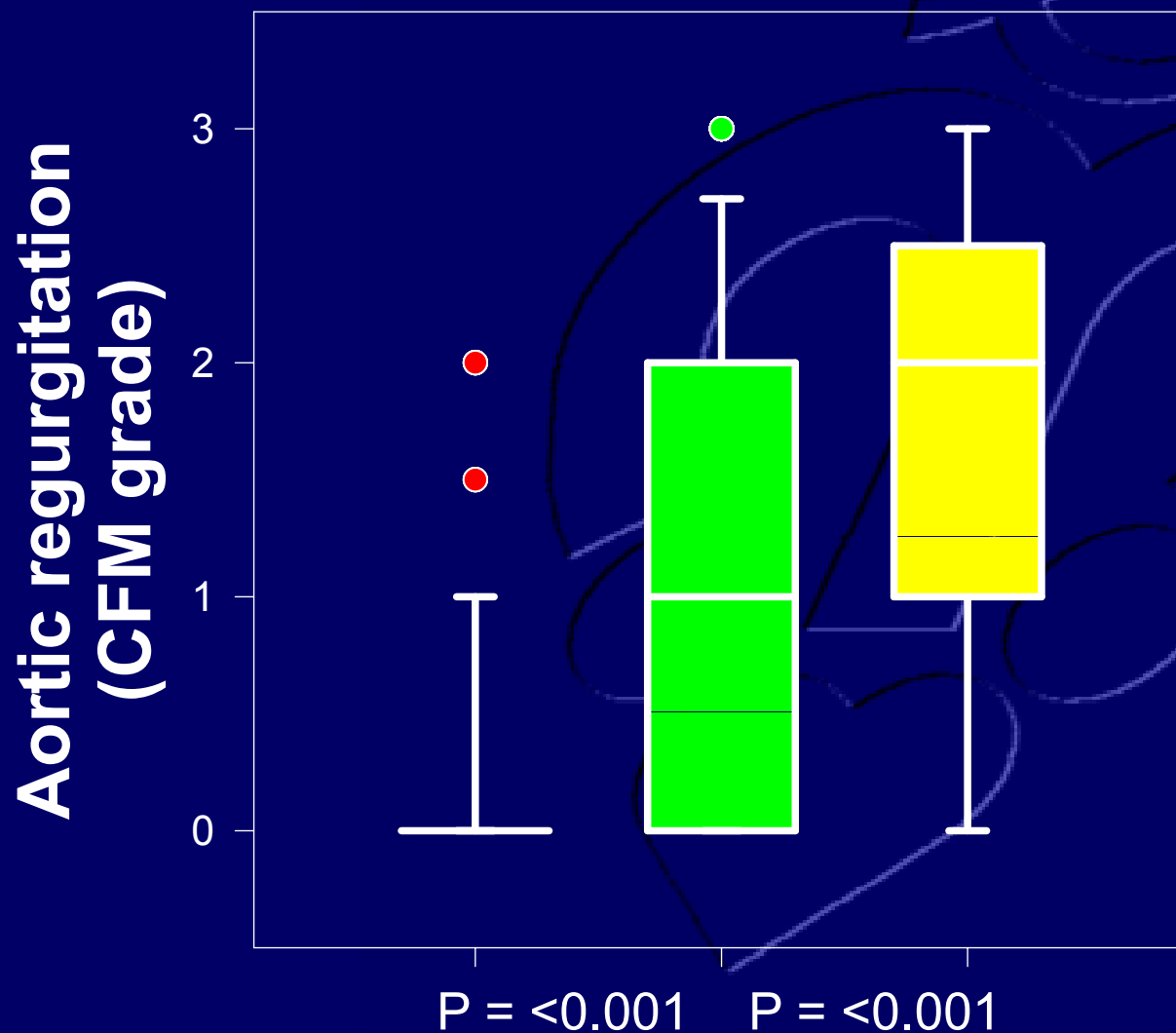
AS gradients before, after VPL, last follow-up

Peak gradient

Mean gradient

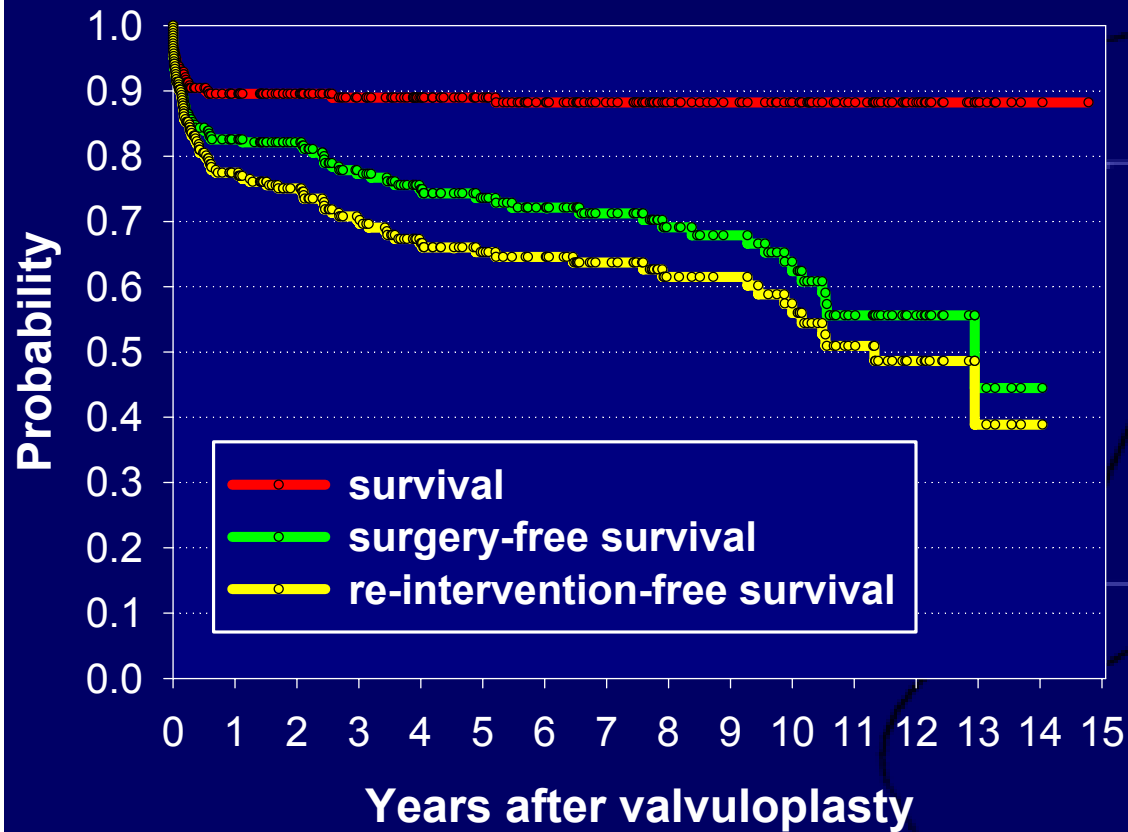


Aortic regurgitation before, after VPL, last follow-up

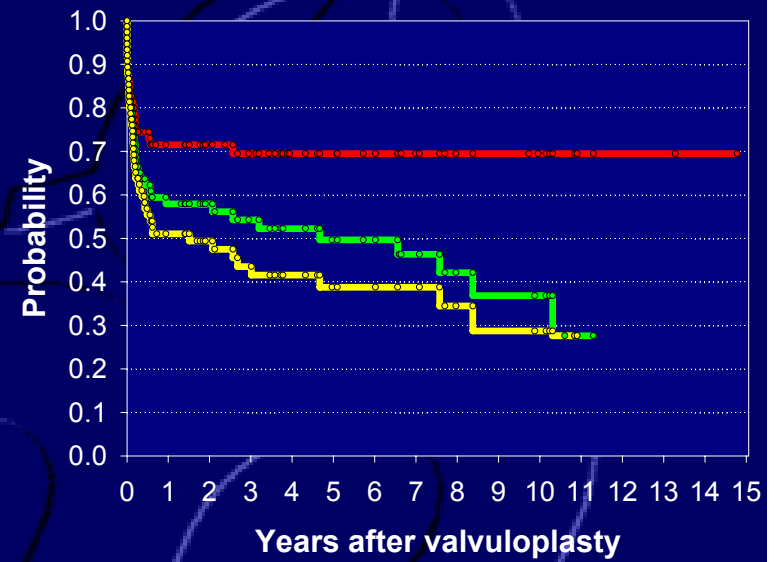


VPL AS actuarial analysis

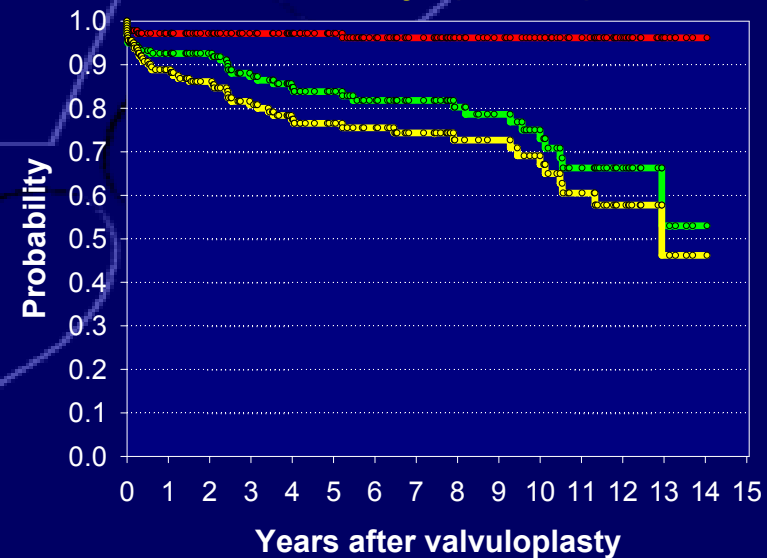
All patients (N = 255)



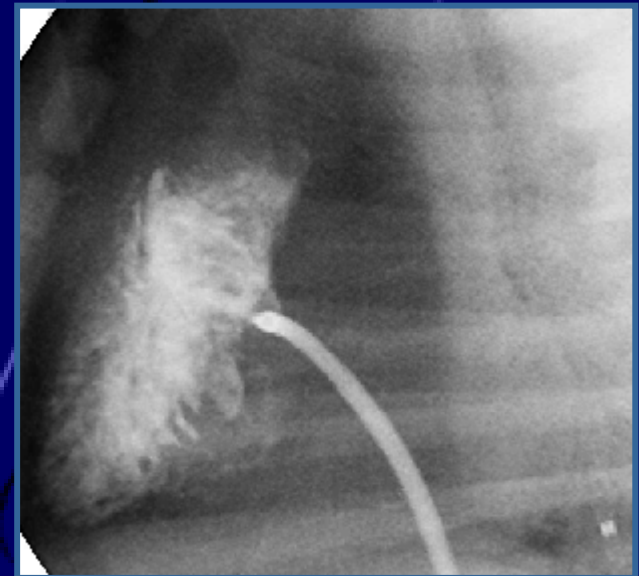
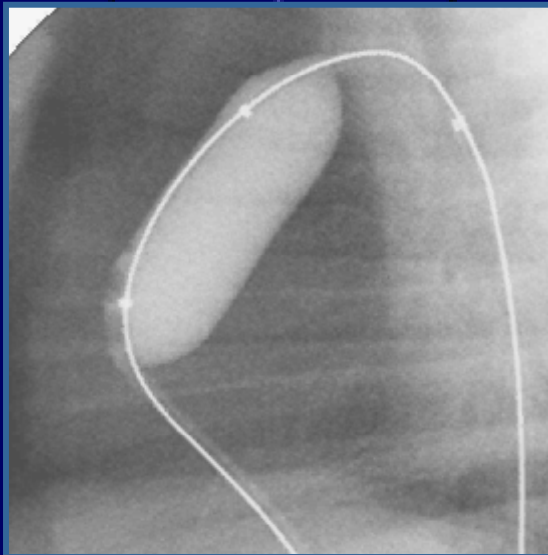
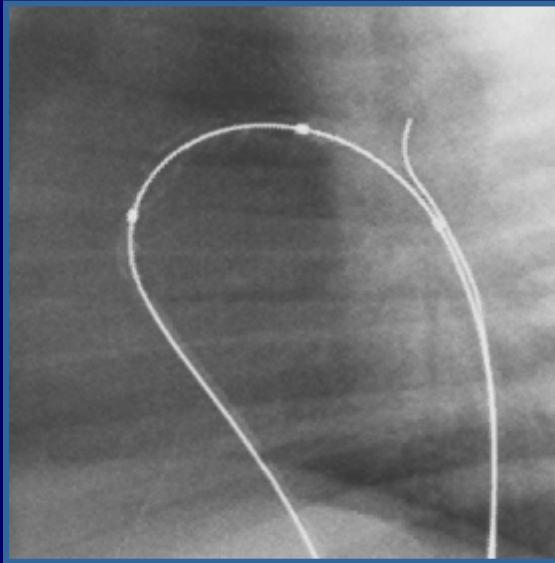
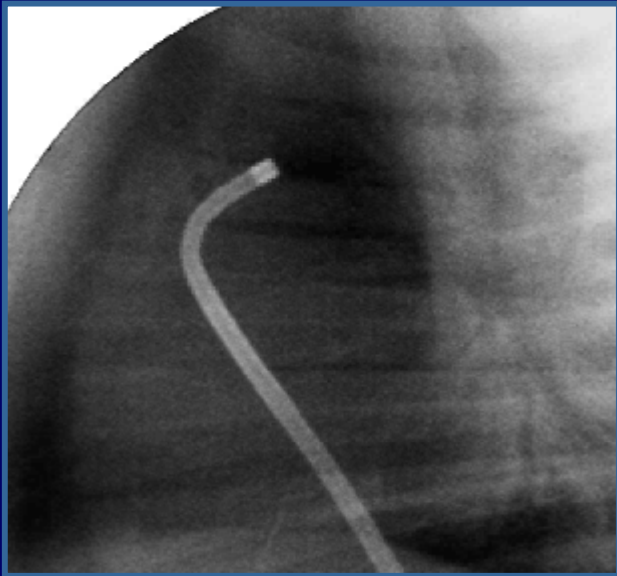
< 29 days (N = 75)



> 28 days (N = 180)



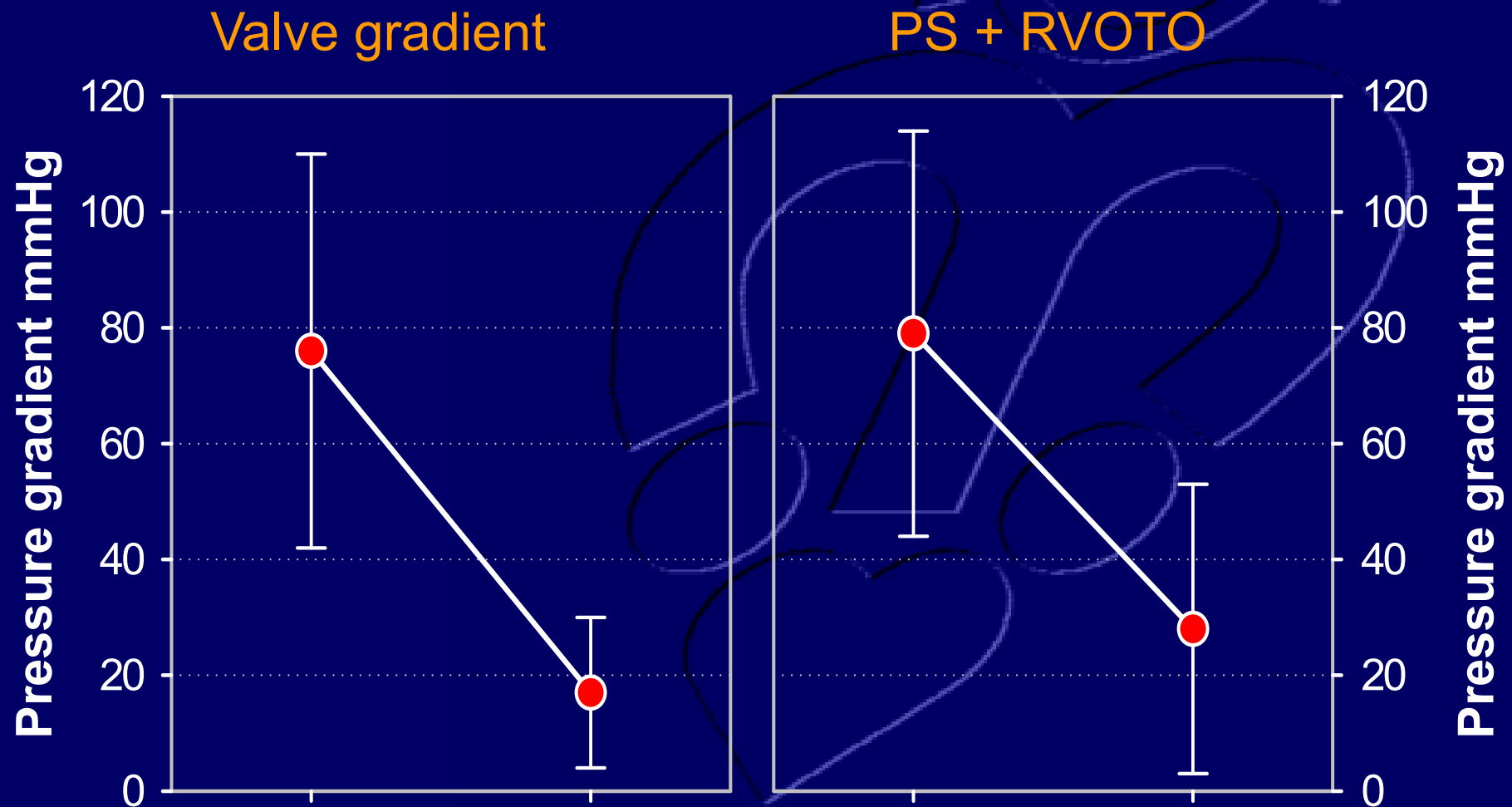
Pulmonary valvuloplasty



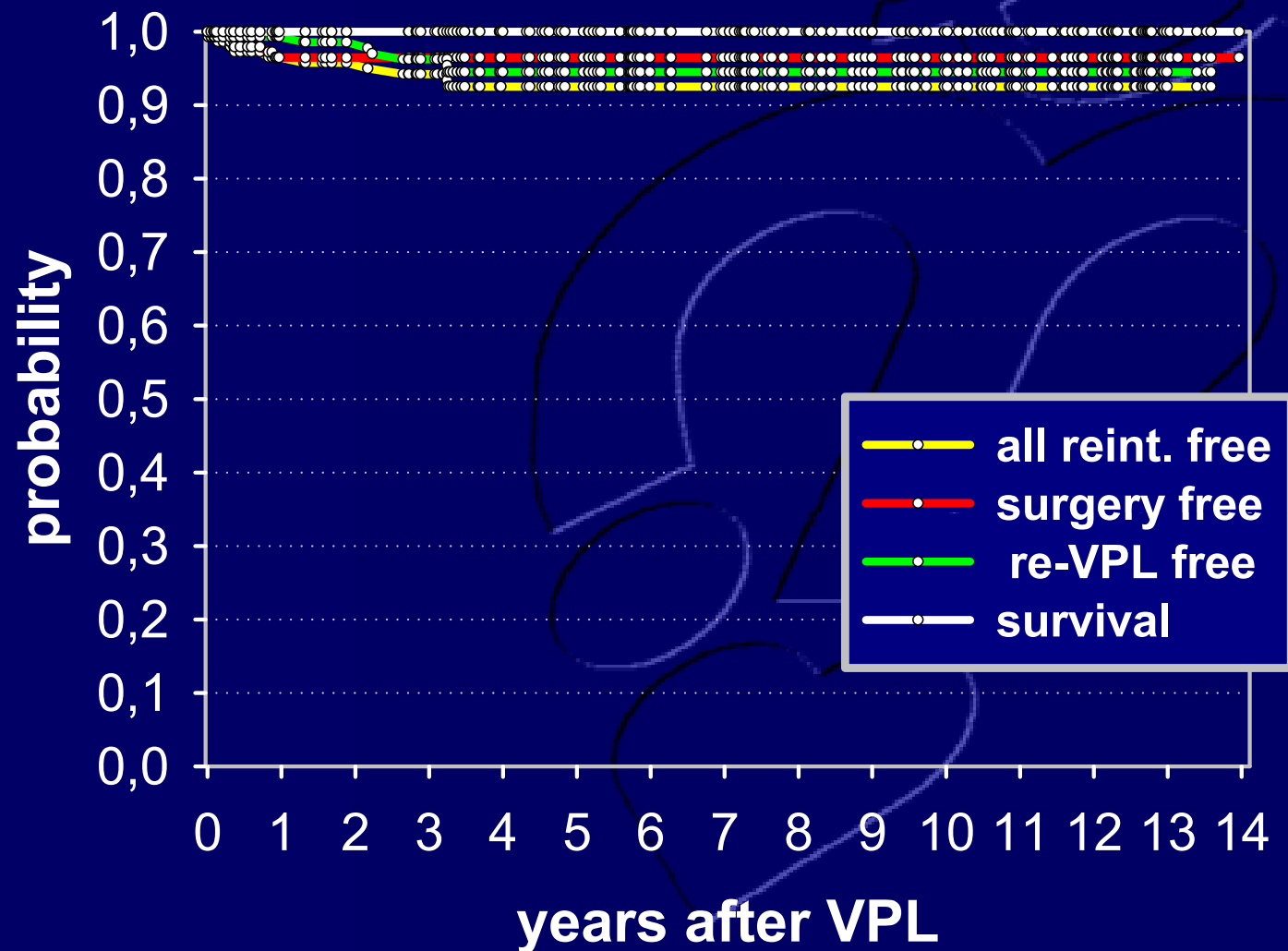
Indications

- critical PS
- gradient > 45 mmHg

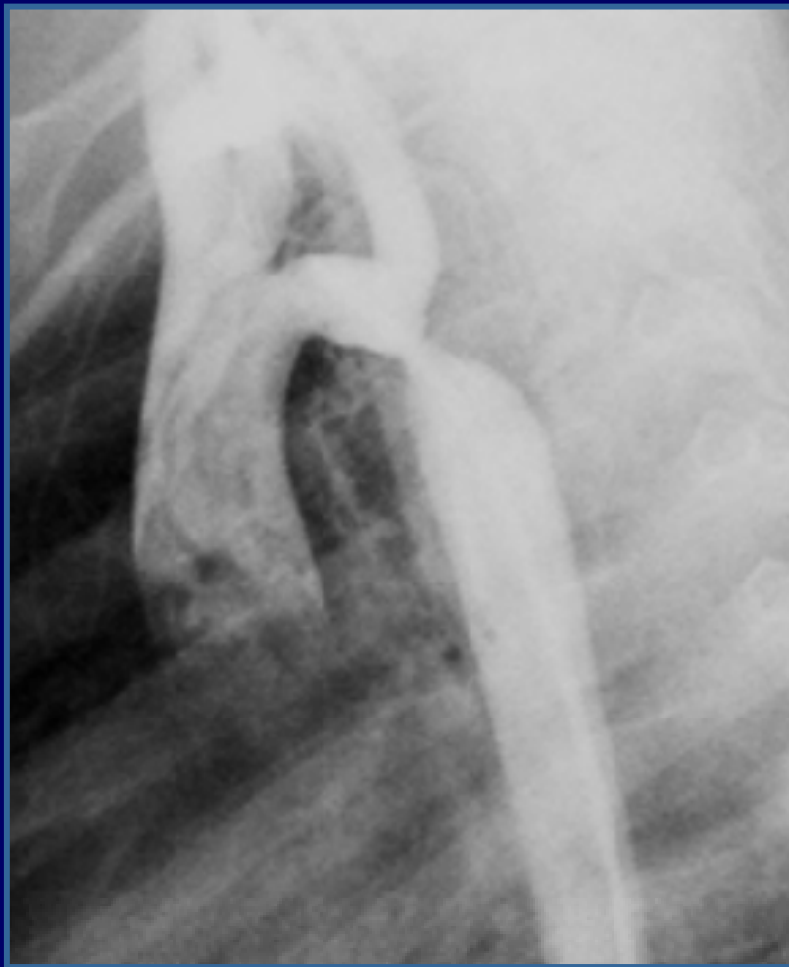
VPL PS: gradient reduction (N = 166)



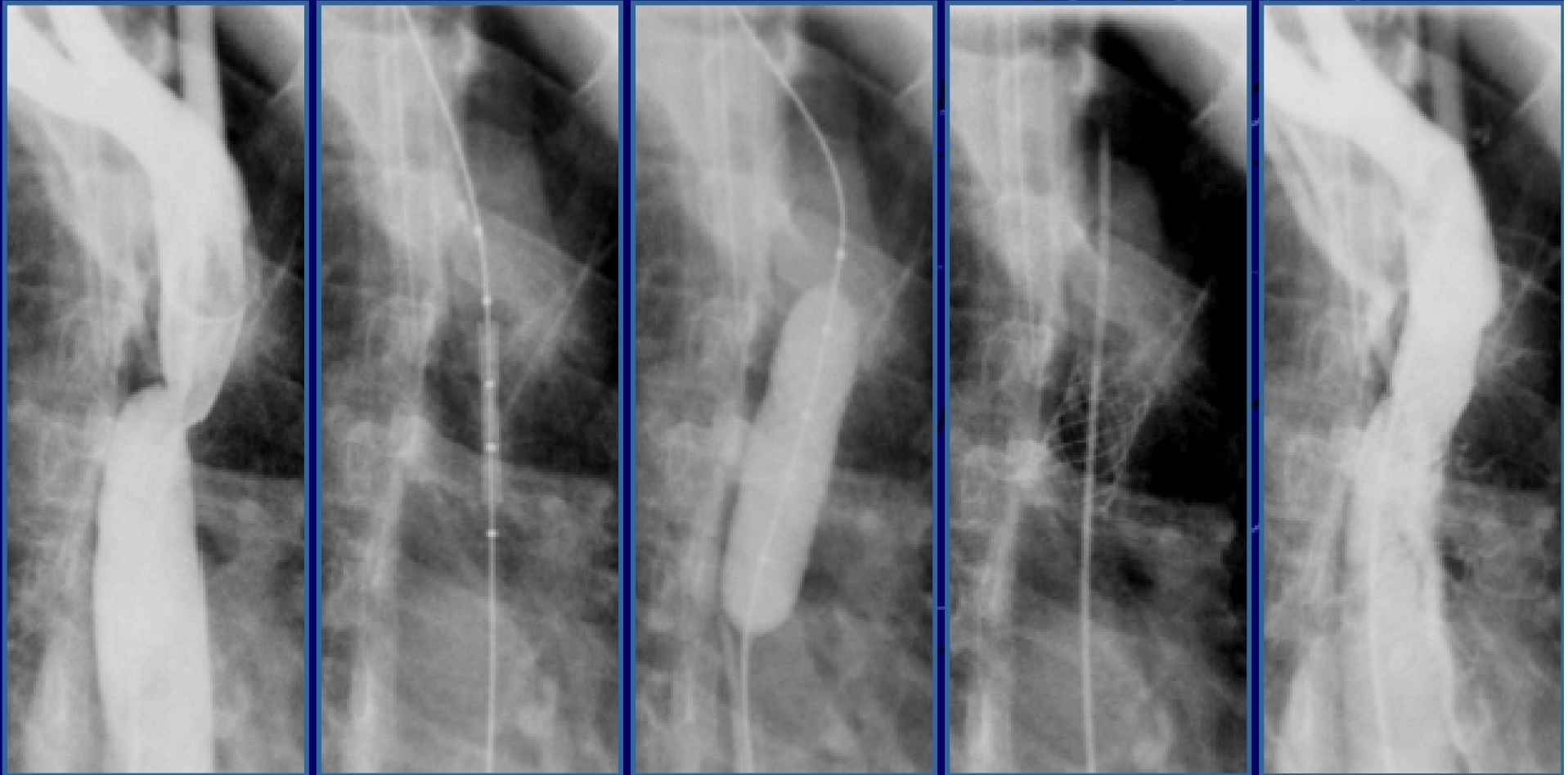
VPL PS: actuarial analysis (N=166)



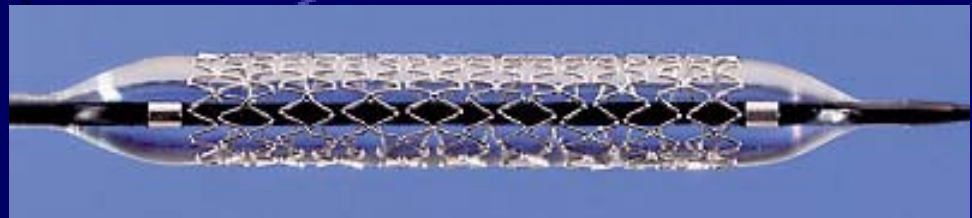
Angioplasty of recoarctation



Stenting of recoarctation



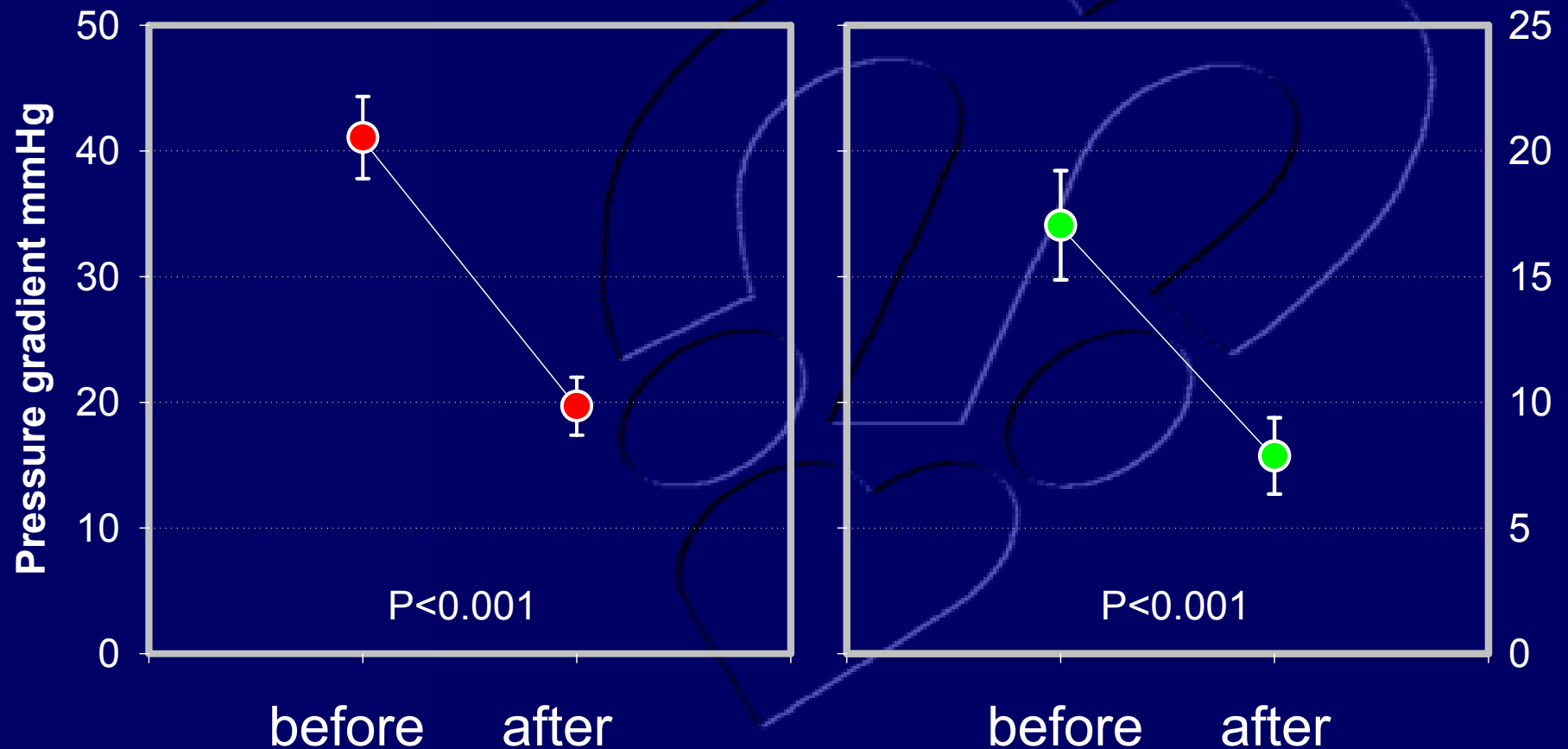
30° RAO, 20° CAUD.



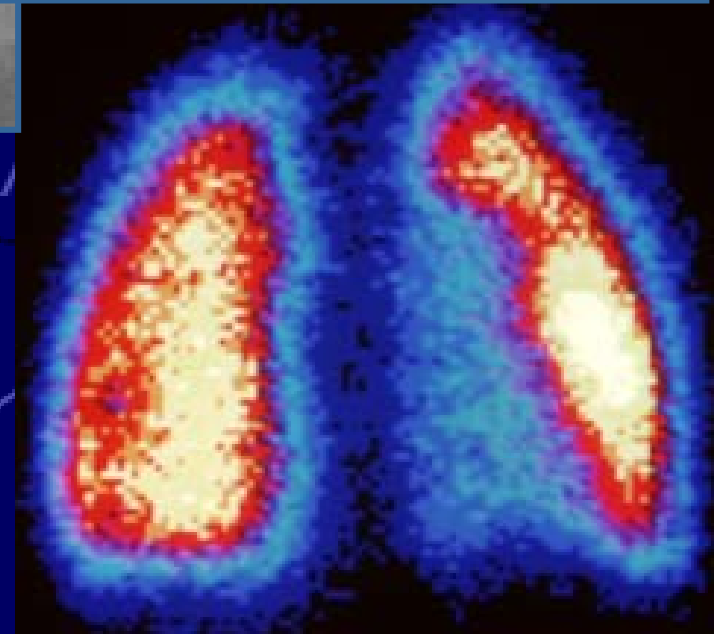
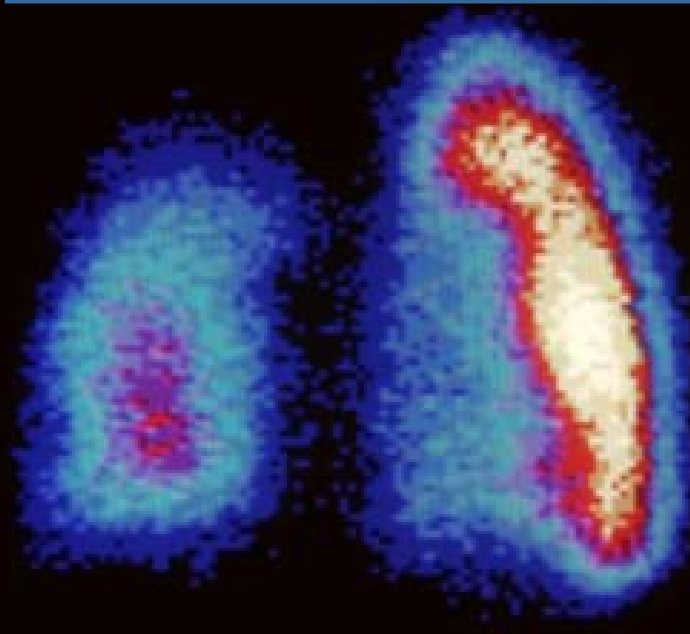
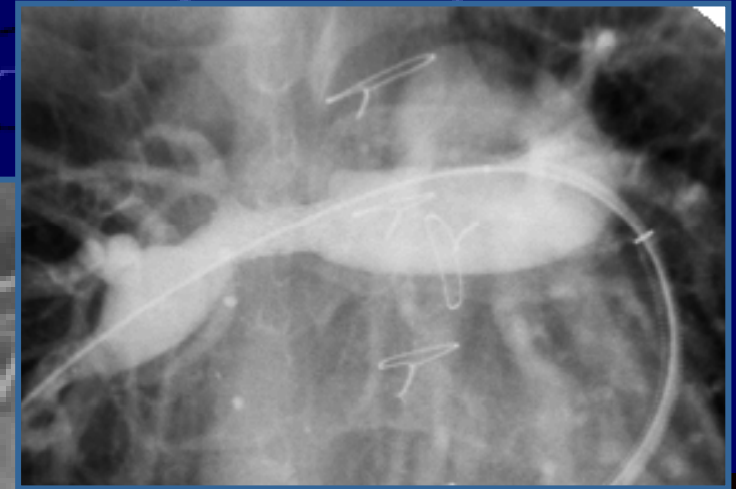
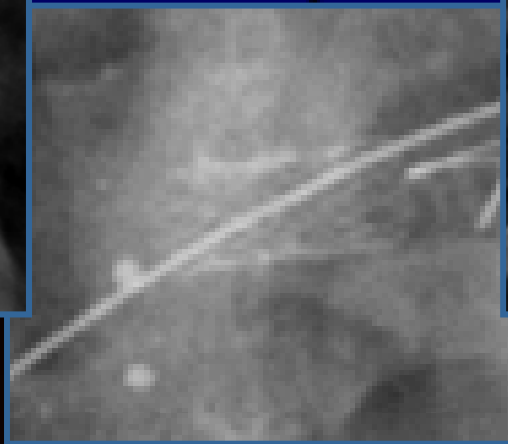
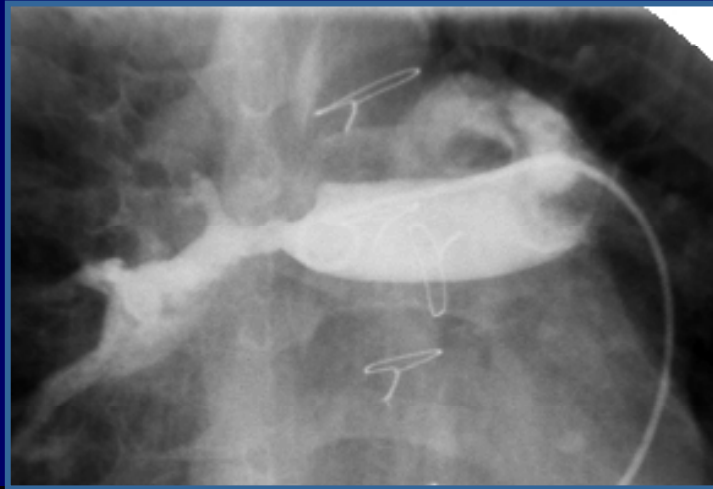
Results APL RECOA

Systolic gradient

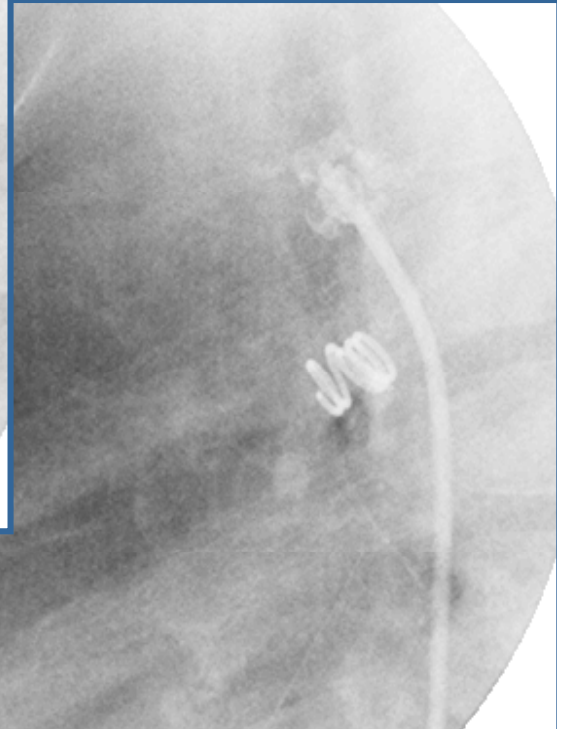
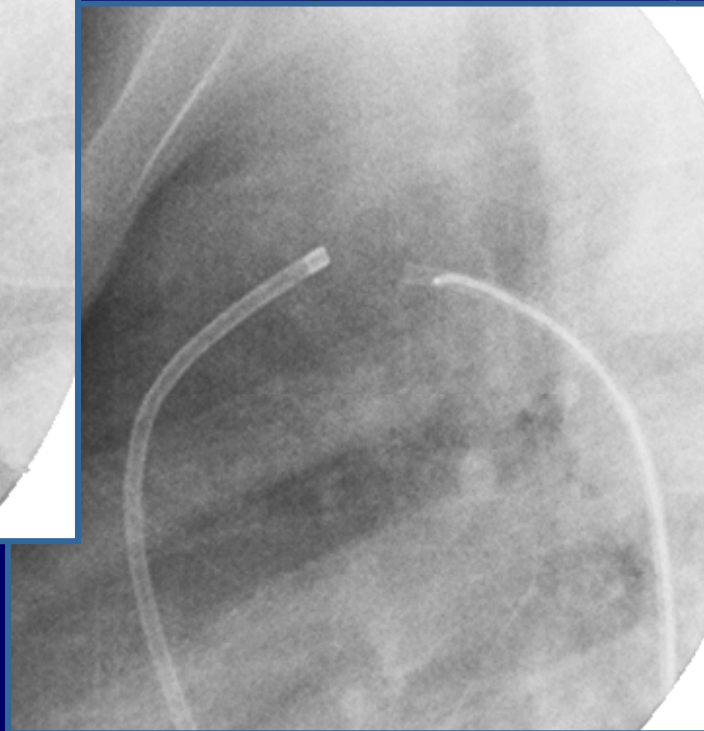
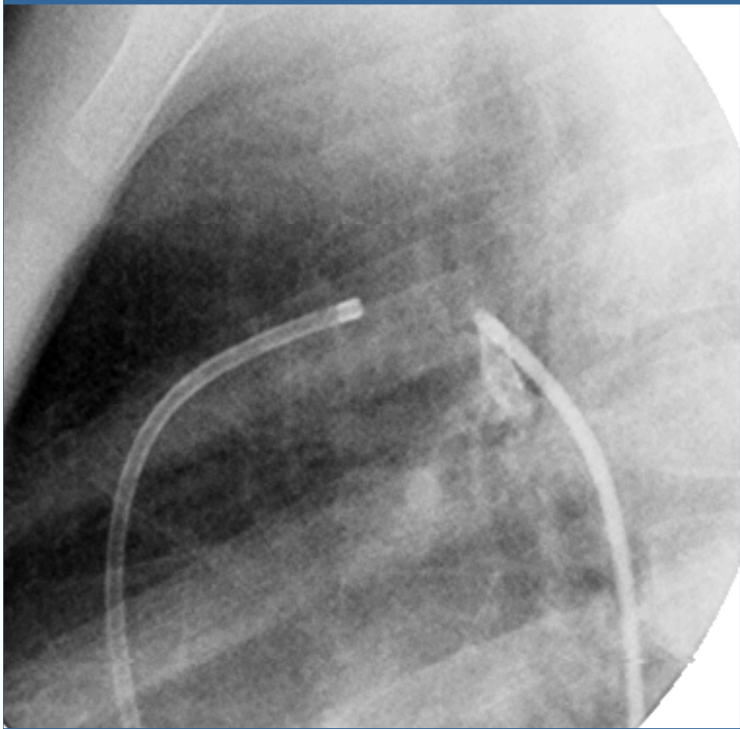
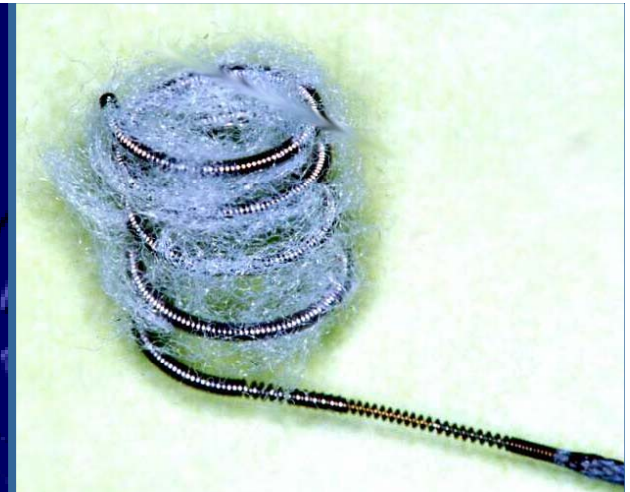
Mean gradient



APL & stent RPA



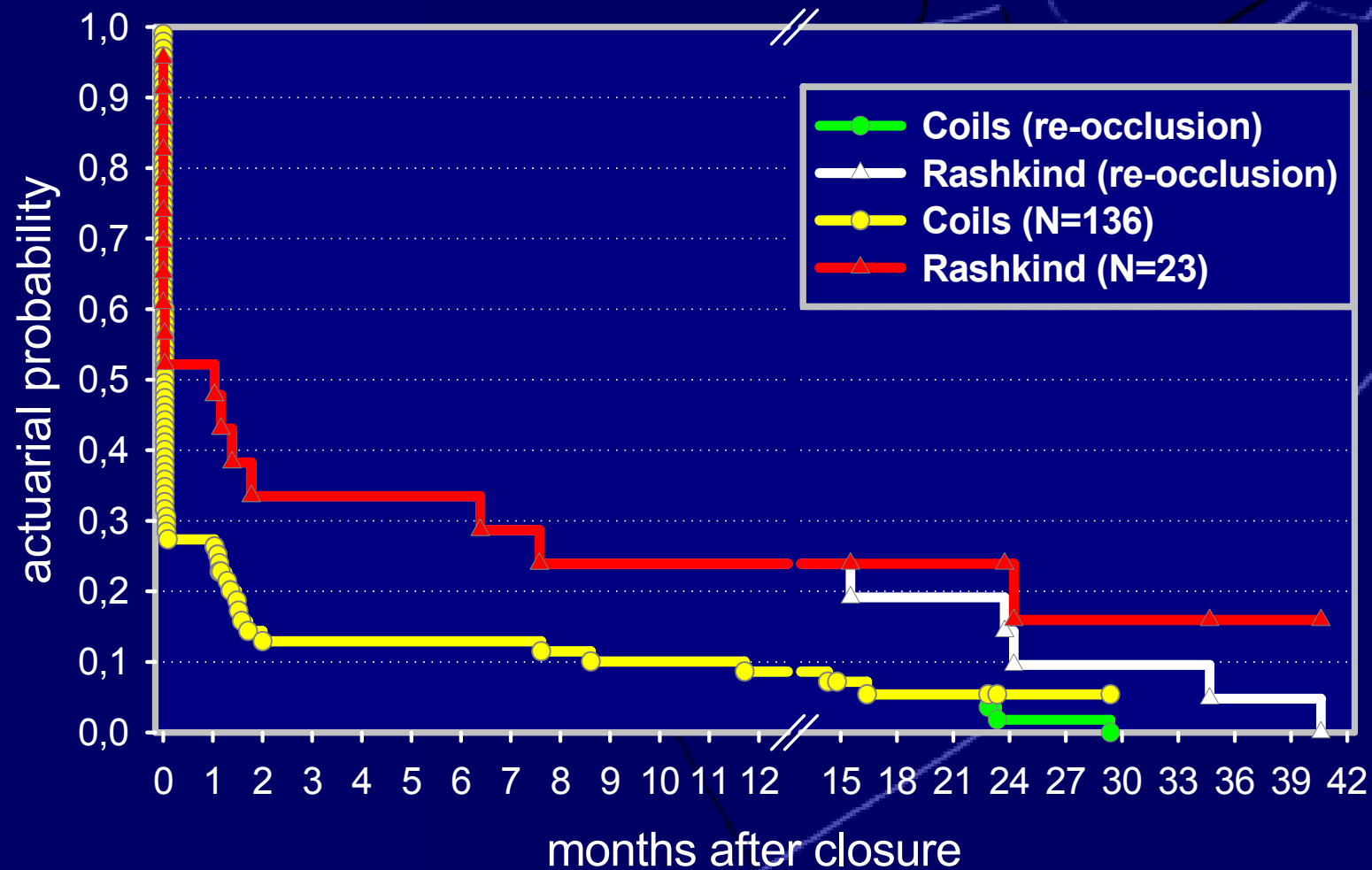
Arterial duct closure



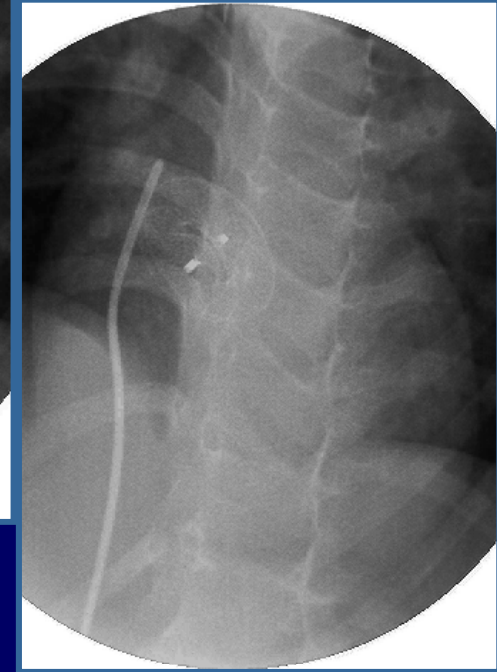
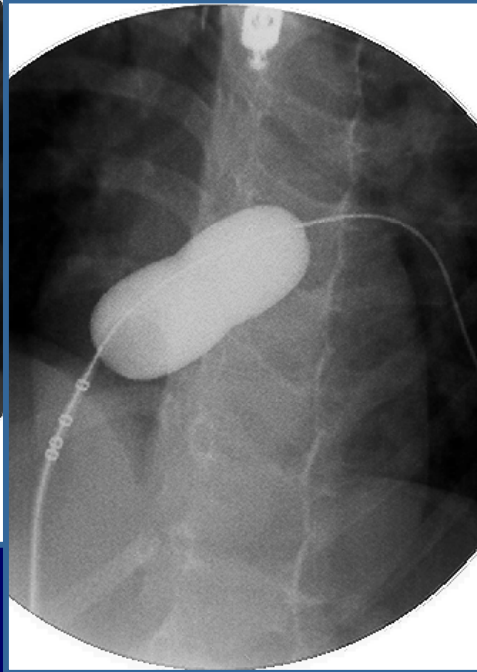
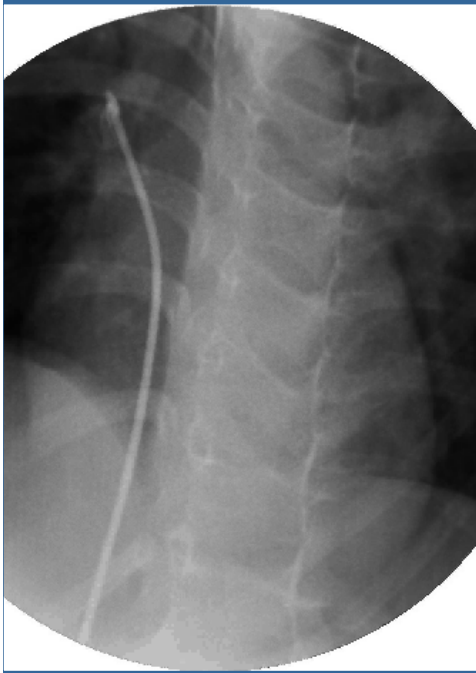
Indications

- PDA < 4.5 mm
- weight > 6 kg

PDA closure: residual shunt (N=159)



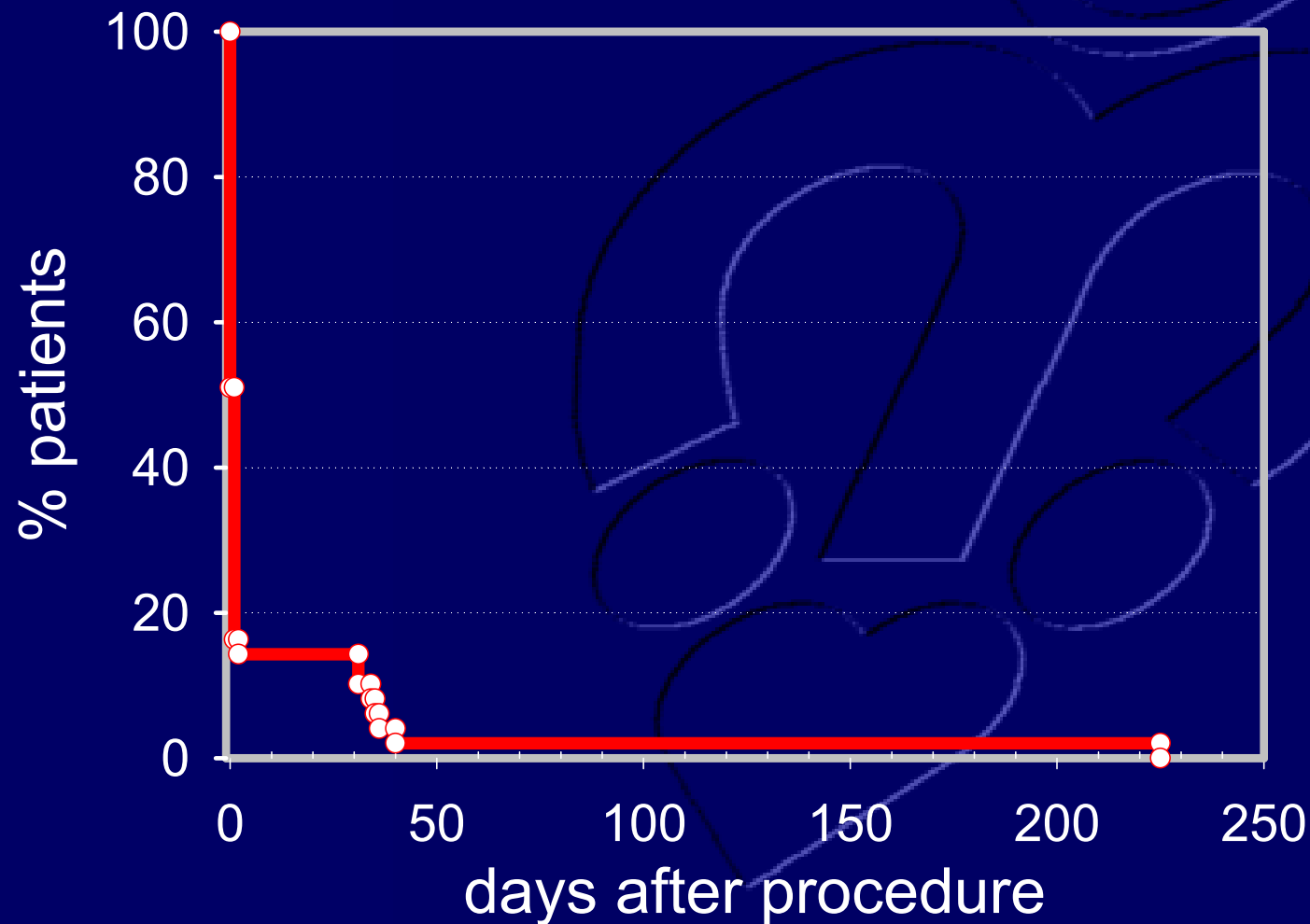
Catheter closure of ASD II



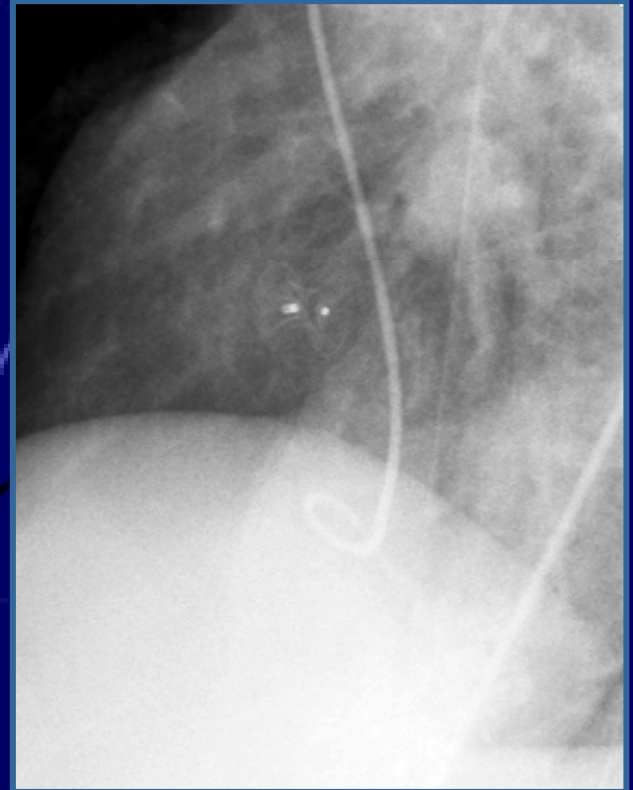
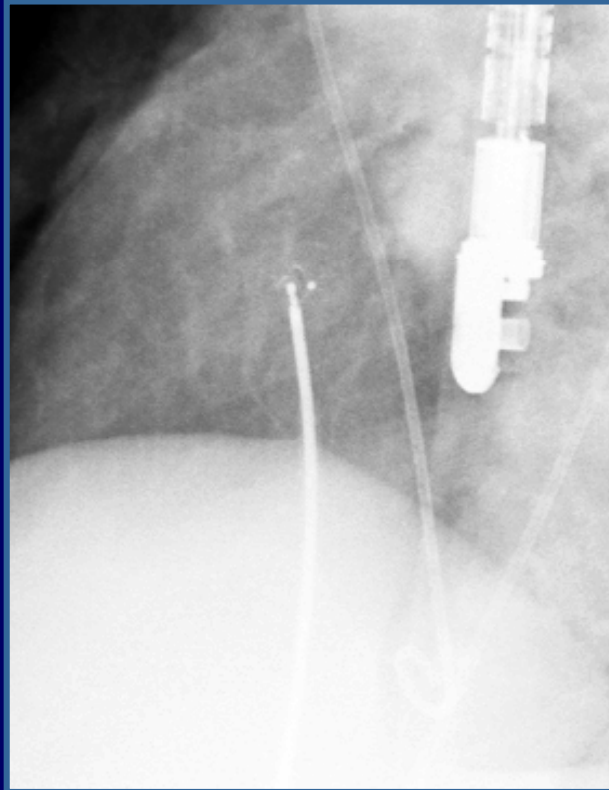
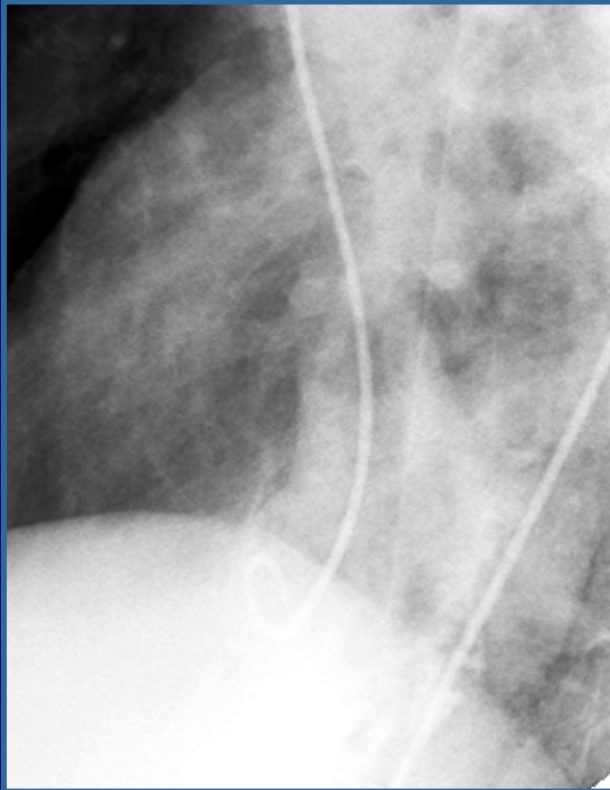
Indications

- significant L to R shunt
- age > 1 year
- central ASD II
- septal rim > 5 mm

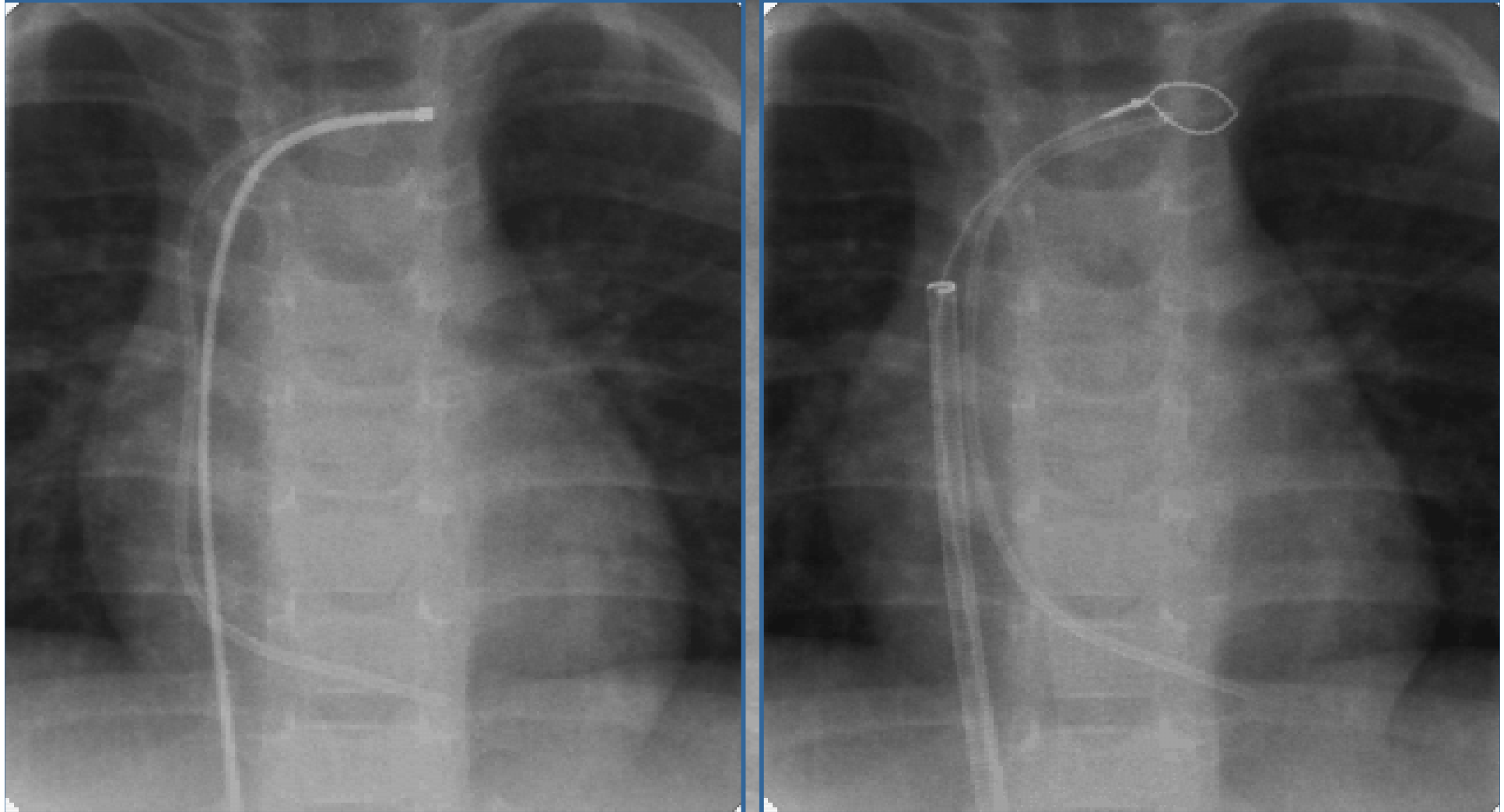
Catheter closure ASD II residual shunt (N = 49)



Catheter closure of ventricular septal defect

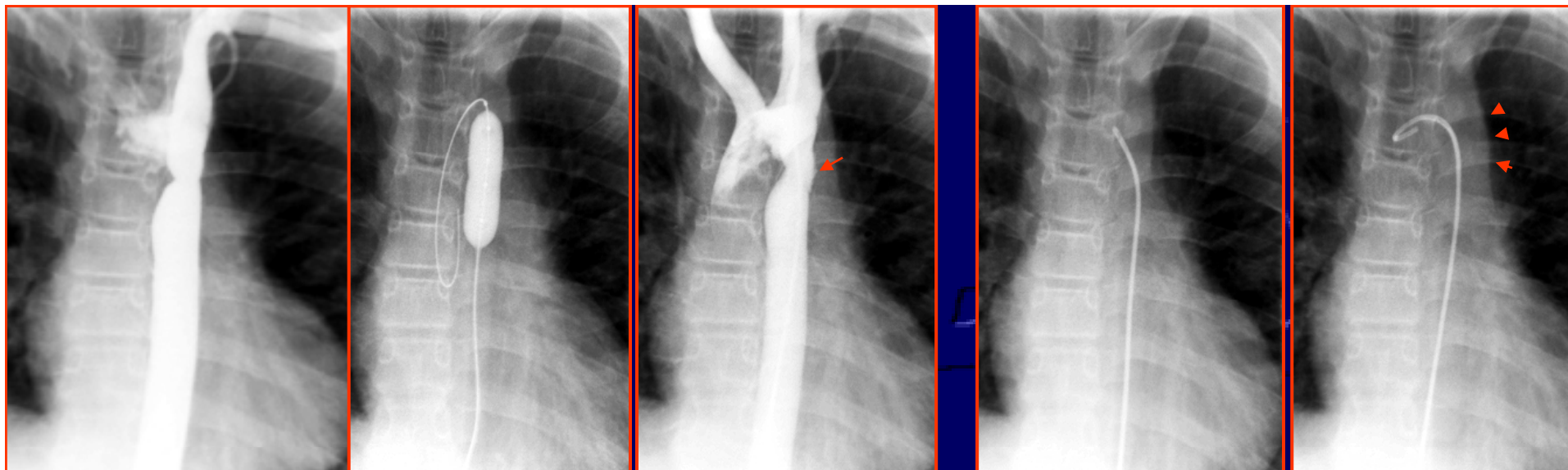


Extraction of foreign body



Catheter interventions

- according to type of CHD and indication
 - life saving palliation (BAS, VPL critical AS and PS)
 - surgical treatment supplement (APL, closure FEN, collaterals)
 - first choice method (VPL, closure PDA and selected ASD II)
- efficiency, risk, mortality and morbidity are comparable with surgical treatment
- are usually cheaper than surgeries
- their importance increases :
 - 50% of all catheterizations
 - 25% of all therapeutic procedures



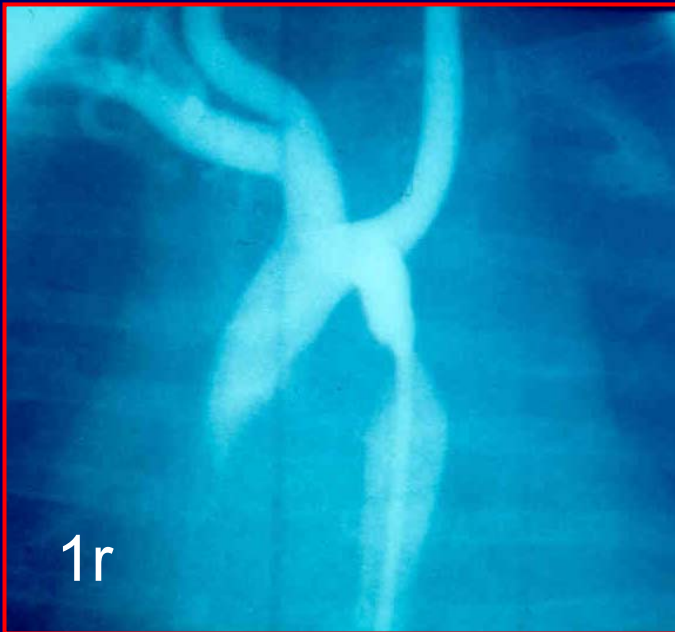
1999

2004

APL RECOA: vývoj aneurysmatu



Koarktace a rekoarktace aorty léčba APL, stent



Katetrizační intervence do konce března 2002

Výkon	od roku	počet
Balónková atrioseptostomie	1967	757
Valvuloplastika aorty	1987	295
Uzávěr tepenné dučeje	1993	233
Valvuloplastika plicnice	1986	207
Ablace arytmogenních substrátů	1993	160
Angioplastika rekoarktace a koarktace aorty	1986	85
Angioplastika plicnic	1986	84
Uzávěr defektu síňového septa	1998	46
Uzávěr fenestrace u totálního kavopulmonálního spojení	1994	32
Angioplastika jiných cév	1986	29
Okluse patologických cév	1989	22
Stentink cév	1994	21
Extrakce cizích těles z kardiovaskulárního systému	1980	14
Okluse arteriovenózních píštělí	1987	13
Celkem	1967	1998

Katetrizační intervence

- podle povahy vady a indikace mohou být
 - život zachraňující paliací (BAS, VPL kritické AS a PS)
 - doplňkem chirurgické léčby (APL, uzávěr FEN, kolaterál)
 - léčbou první volby (VPL, uzávěr PDA a vybraných ASD II)
- jejich účinnost, riziko, mortalita a morbidita jsou srovnatelné s odpovídajícím chirurgickým léčením
- jsou většinou levnější než operace
- jejich význam roste :
 - 50% všech katetrizací
 - 25% všech léčebných intervencí