Longterm results of left main PCI

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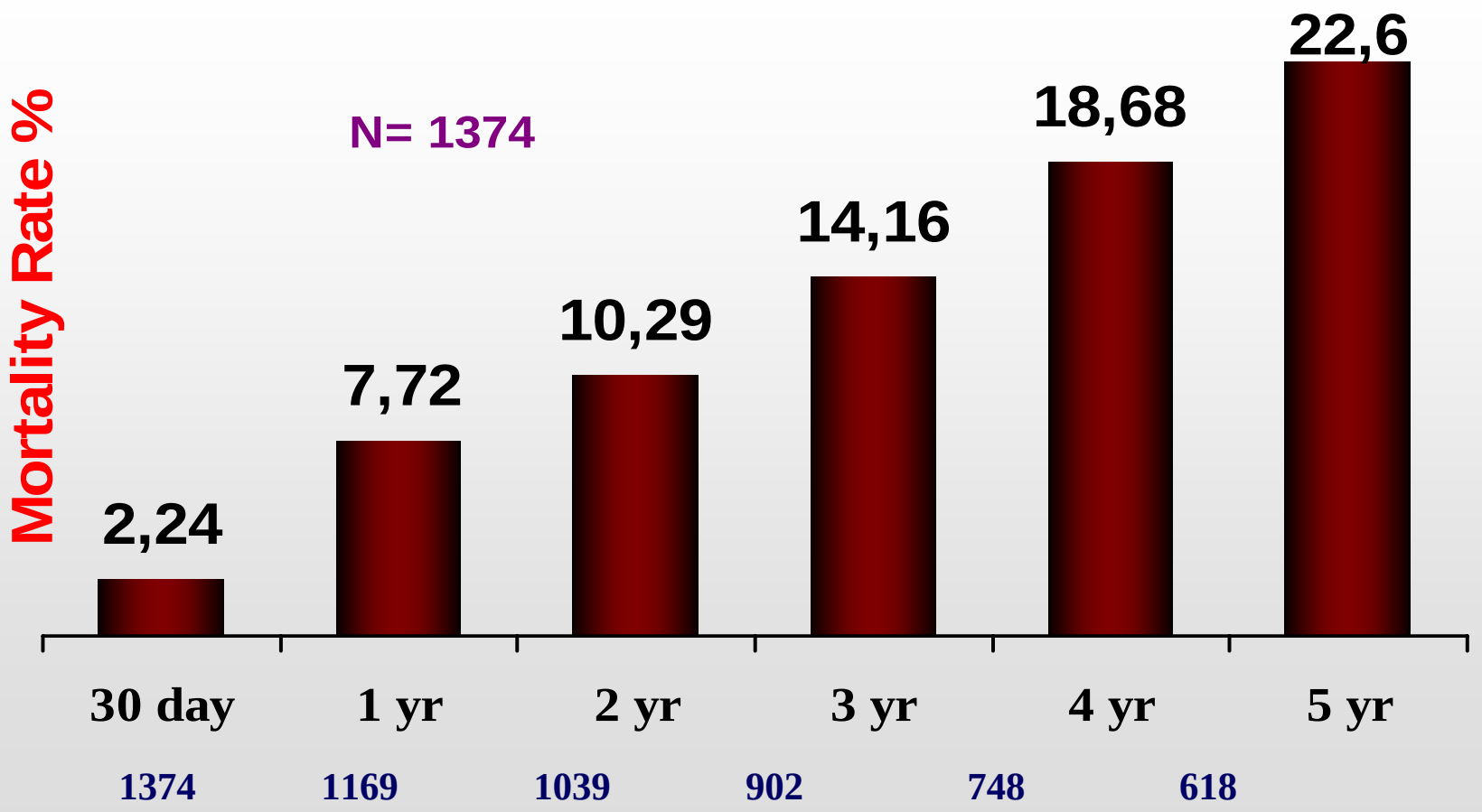
LM PCI

- CABG has traditionally been considered the standard treatment for left main PCI
- PCI with drug eluting stents have reported very promising results
- Stent thrombosis and bifurcation restenosis were regarded like a threat for good longterm results
- Careful observation of observational series and randomized studies will determine the role of left main PCI

Duke Database

CABG for Left Main Disease

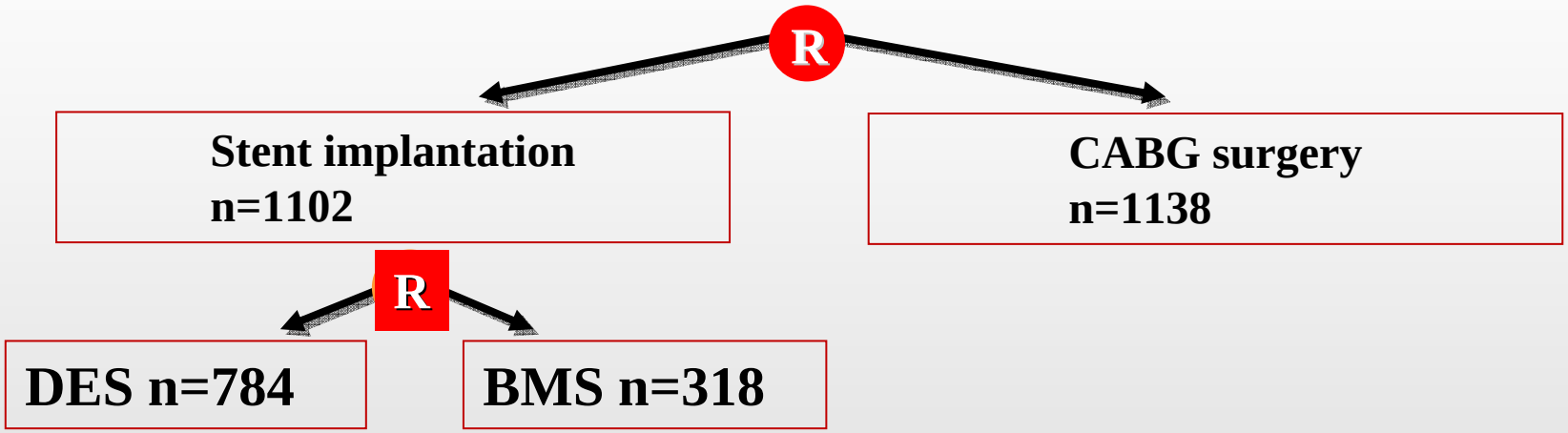


Personal communication Peter Berger

Seoul 2008

MAIN-COMPARE Study: Study Design

2240 patients with unprotected left main artery disease, excluding those with prior CABG, valvular & aortic surgery, STEMI, or cardiogenic shock
Prospective. Non-randomized. Observational.
49% underwent stent implantation and 51% underwent CABG surgery



1017 days median follow-up

1152 days median follow-up

- **Primary Endpoint: Death; the composite of death, Q-wave myocardial infarction or stroke; target vessel revascularization (TVR).**

MAIN-COMPARE Study: Summary

- The results of this study suggest that there is no significant difference in the mortality rate or the composite risk of death, Q-wave MI or stroke among patients with unprotected LMCA disease who undergo PCI vs. CABG.

- However, CABG was associated with significant reduction in the incidence of target vessel revascularization compared to PCI.

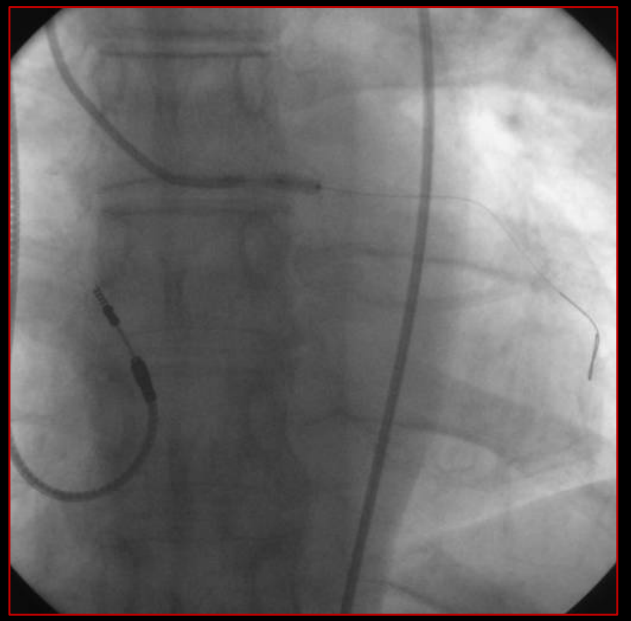
HUGM Experience

- We have evaluated the results of 101 consecutive patients with left main disease treated with percutaneous intervention (using Taxus stent) and follow up for at least 1 year

TECHNIQUE

Ostial –Midshaft Lesions

- **Simple procedure**
- **JL 3.5 6Fr guiding catheter**
- **Consider wiring form outside ostium and pre IVUS dilatation**
- **IVUS interrogation of plaque characteristics and remodeling**
- **Predilatation or plaque modification**
- **Stent implantation and optimization**
- **IVUS assessment of the result**



CCM-1

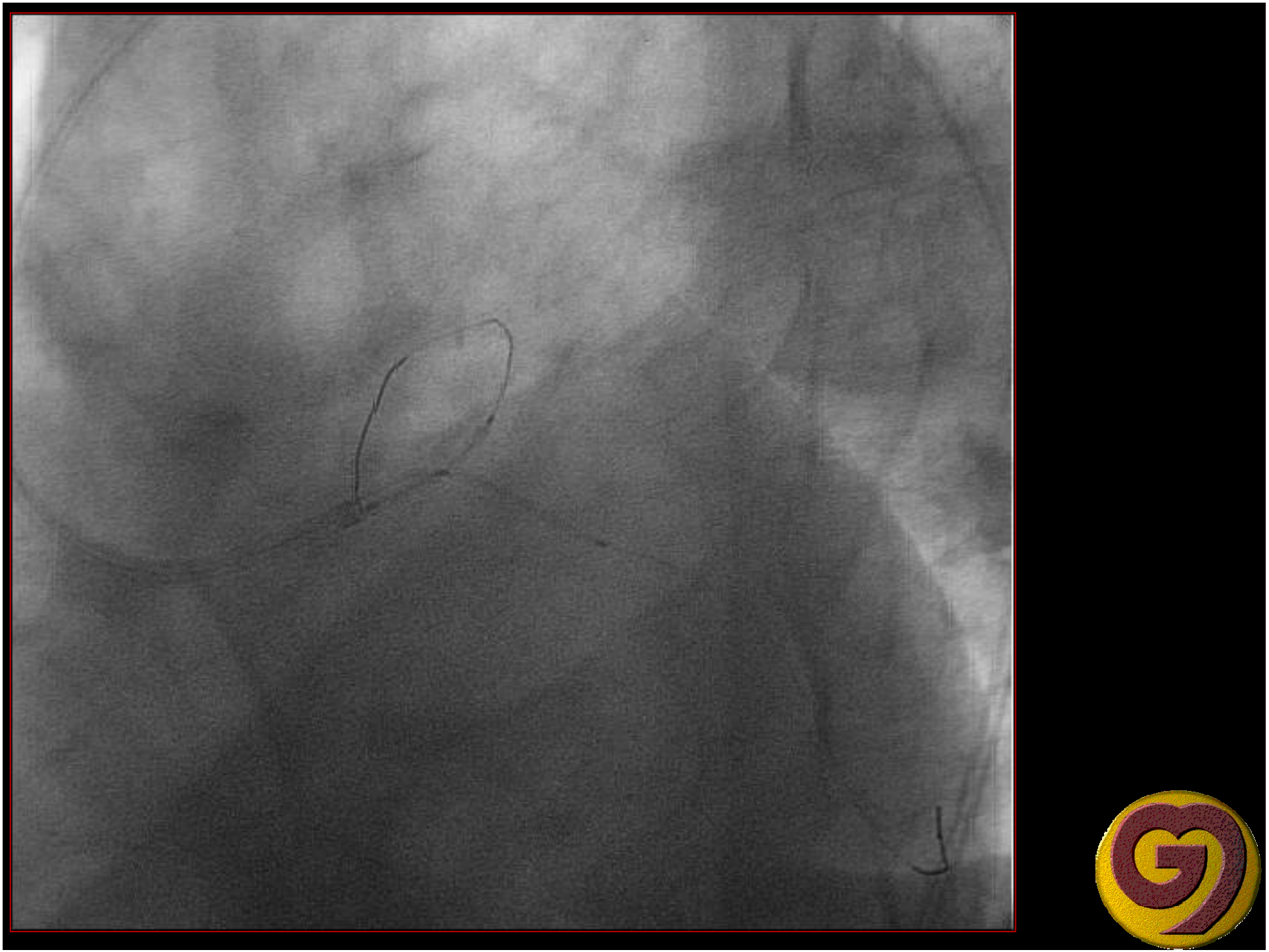
CCM-2

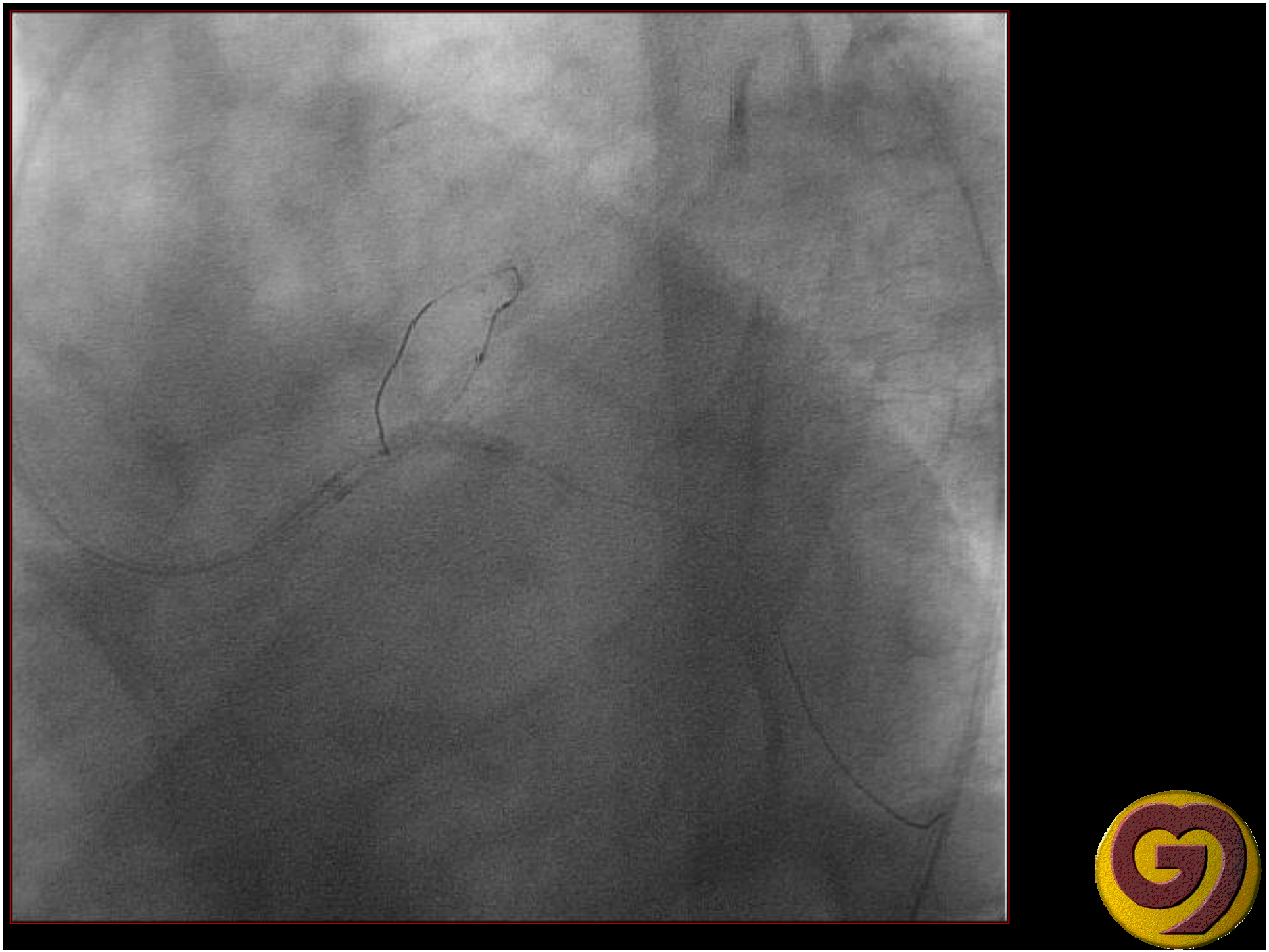
GENERAL STRATEGY

- IVUS interrogation of lesion characteristics helps to plan the procedure
- If stenosis is critical , predilate before IVUS
- Plaque modification (cutting) in cases of calcium or heavy plaque burden
- Rotational atherectomy if diffuse, calcified disease
- Always final kissing balloon independent of technique used
- IVUS evaluation of the result

Distal Bifurcation : One or two stents?

- One stent if lesion involves only one vessel
- One stent if moderate lesion on branch vessel
- Two stents if severe lesion on both
- Two stents if significant lesion and/or dissection after branch dilatation





NEED for CARDIOCIRCULATORY SUPPORT

- **When the patient has two of the three following characteristics :**
  - **Right coronary artery occluded**
  - **Severe left ventricular disfunction**
  - **Anatomically difficult lesion to treat**

INCLUSIONS AND EXCLUSIONS

- **Included:** Patients with significant stenosis of the left main trunk who accepted the percutaneous treatment offered by his treating physician and the interventional cardiologist
- **Excluded:** patients with AMI in whom the left main was treated during a procedure of primary angioplasty

LM PCI

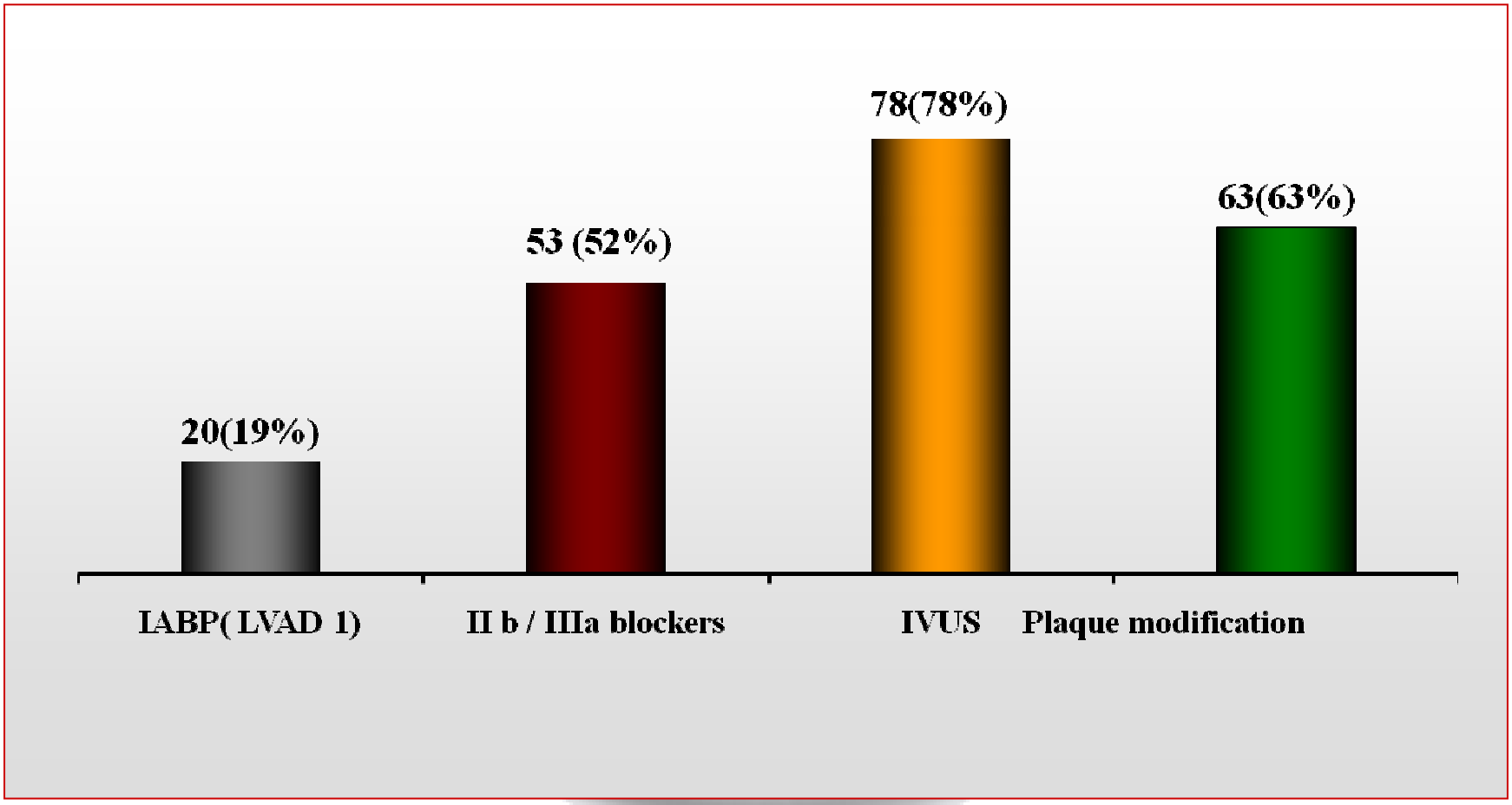
N= 101 . Follow up =25,3 months (14.1-44.8 months)	
Age	69±11 yrs
Male gender	77
Diabetes	31
Previous MI	25

Seoul 2008

RISK PROFILE

CD occluded or severily stenosed	58%
Age > 75 yrs	30%
MVD	90%
EF<40%	27%

Procedural Data



Stent technique

One stent	50 (49.5%)
2 stents	51 (50.5%)
Final kissing	101 (100%)

IN-HOSPITAL RESULTS

Procedural Success	**100 %**
Clinical succes	**95%**
Cardiac death	**1.7%**
NQMI	**3%**
Transient CVA	**0.6%**
TVR	**0**

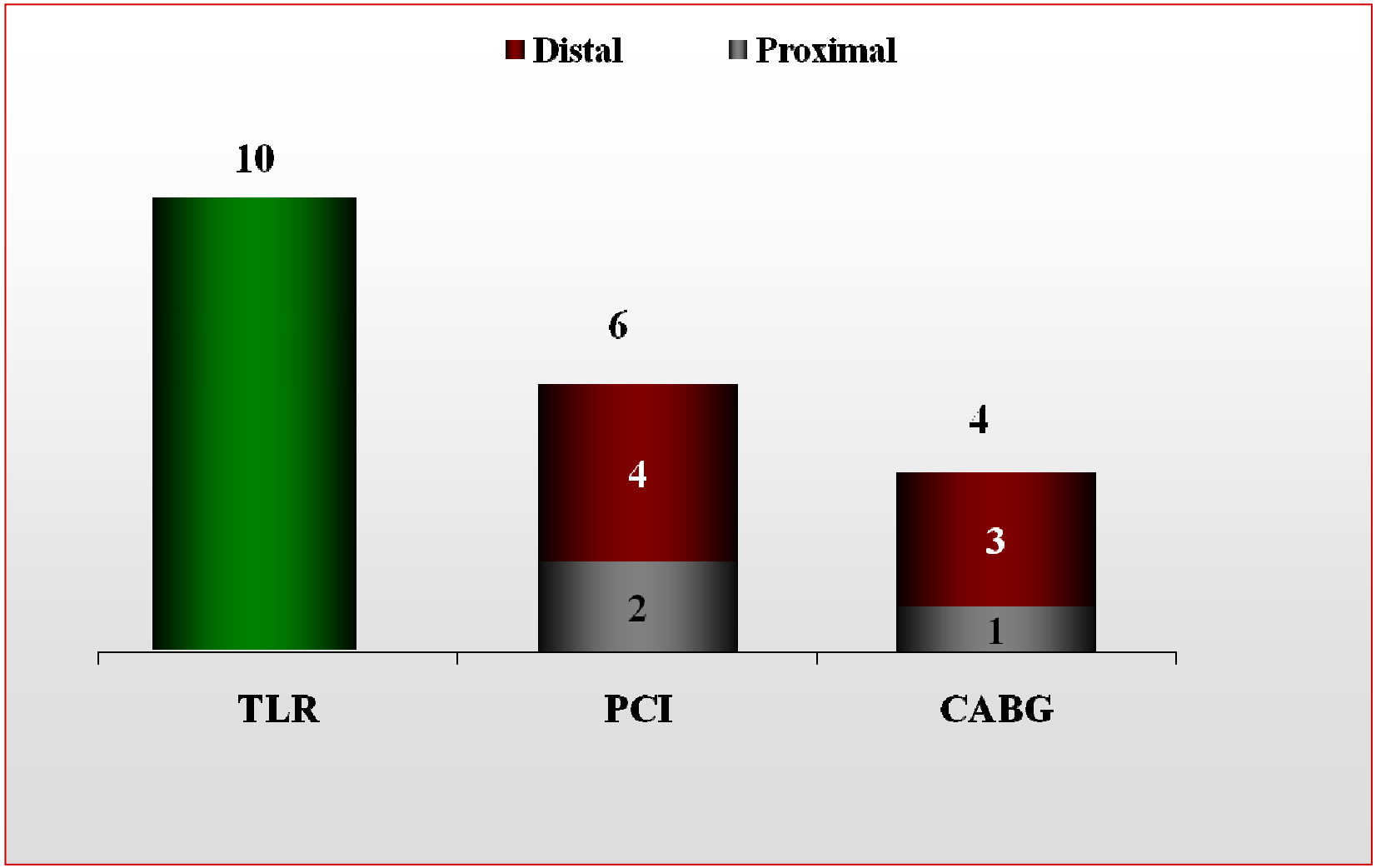
Longterm results

	12 months	25 months
Mortality	6%	6%
MI	3%	3%
TVR	9%	10%
Total MACE	18%	20%

Predictors of Mortality

	1 mo	12 mo
EF	0.91 (95% CI: 0.86-0.99)	0.76 (95% CI: 0.59-0.98)

TLR Narrative



Mortality Narrative

1. 80 yr. CD occluded. EF 30% . Peri procedural MI. Cardiac rupture 5 days post procedure
2. 71 years. CD occluded. EF 15%. 19 days post procedure admitted for CHF. Two days later cardiac arrest post VF. Unsuccessful PCR
3. 75 years EF 35%. Severe aortic stenosis. Severe hypotension. EM disociation
4. 78 years. 7 days post procedure : occlusion LAD (non treated lesion) Anterion MI. Shock
5. 83 years old . EF 20%. Sudden death 5 mo. Post-procedure
6. 70 years old. EF 18%. CHF and death 1 month post procedure

CONCLUSIONS

- **Percutaneous treatment of unprotected left main disease can be accomplished with safety and efficacy (good midterm results) in the era of drug eluting stents.**
- **Polymer based paclitaxel eluting stent (Taxus) used for left main disease is followed by good sustained clinical result at long term follow up.**
- **The technique used was related to lesion type with no difference in outcome observed among different approaches (1 stent only, 1 stent with final kissing or minicrush)**