

Double valve replacements in the Octogenarian population – a viable option for the future?

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Introduction

- At least 20 million Octogenarians by 2020 in Europe
- Symptomatic cardiac disease - 40%
- More referrals – however, uncertainty over operative & long-term survival still exists

Current Evidence

- 62 Retrospective cohorts
- Level 3
- Isolated valve (21), CABG (8), AVR+CABG(32)
- One cohort on double valve replacement

Summary of current evidence

- Cardiac surgery in a UK population of octogenarians produced excellent results. Long term survival was significantly better in the study patients than in a general population with the same age distribution. (*Heart* april 2006, 92/3)
- CABG for Octogenarians can be performed safely with acceptable short term and long term outcome. (*Nature clinical practice cardiovasc med*, nov 2008,5/11)
- Surgery for symptomatic AS in octogenarians has an acceptable operative risk, improved functional status and satisfactory midterm survival rates, justifies surgery in advanced age. (*Ann Thorac Surg*, april 2008, 85/4 ; *Thorac cardiovasc surg*, february 2008, 56/1)

Double valve surgery

- High end of spectrum for operative risk across the age
- High requirement of resources
- Long term outcome unknown

Evidence for double valve replacement

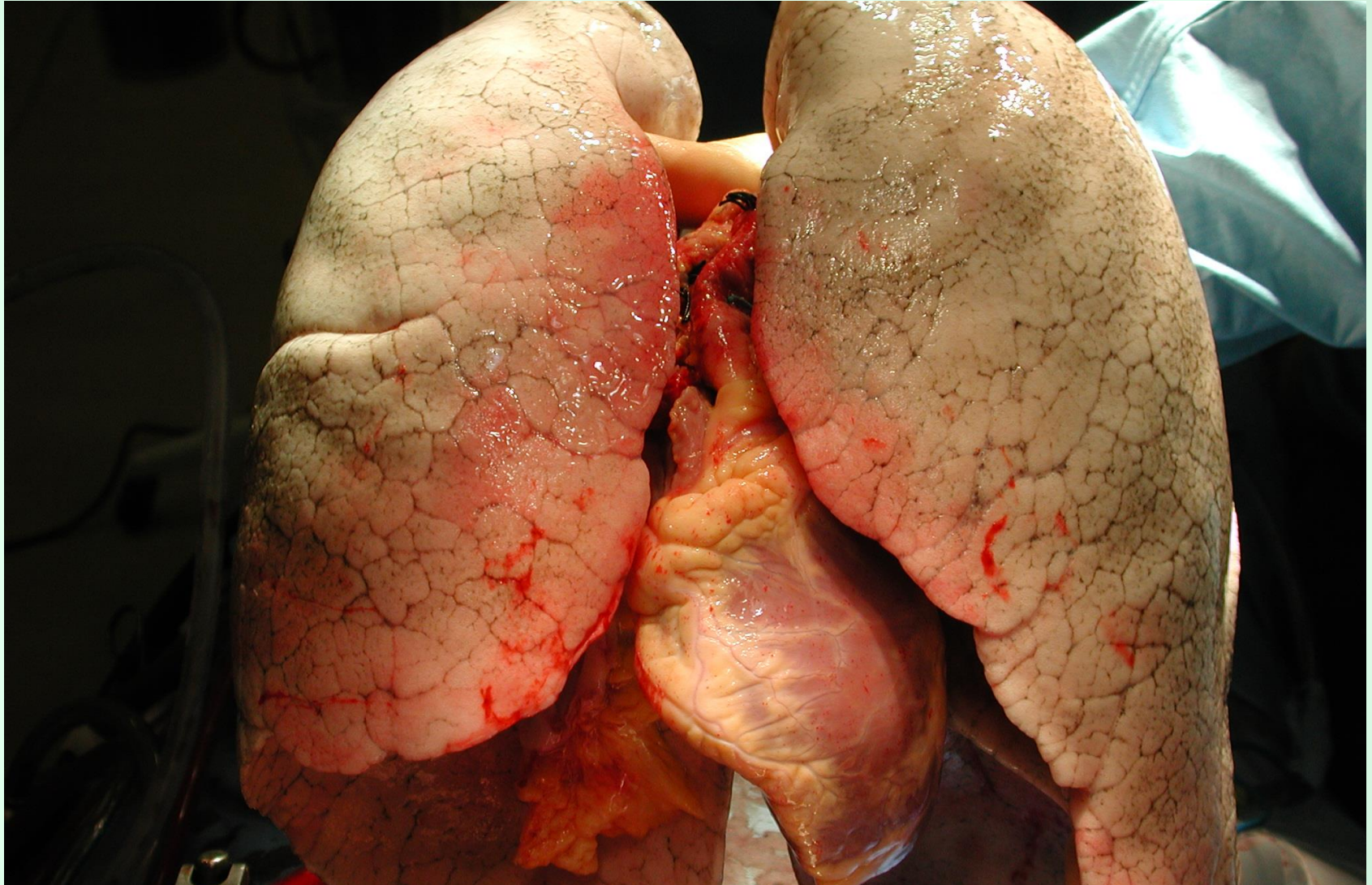
- **Simultaneous Aortic and Mitral Valve Replacement in octogenarians: A Viable option?** (*Ann Thorac Surg* 2008; 86: 1804-8)
- Retrospective study – 55 patients
- Concomitant diagnoses: AF(73%), CAD (44%), renal insufficiency (29%)
- Survival rates at 30 days and 1 year were 91% and 71% respectively.
- Bypass time, Pre-op stroke and post op intestinal failure were predictors for mortality.
- Conclusion: For selected octogenarians double valve replacement can be performed with acceptable outcome.

Papworth Hospital, UK

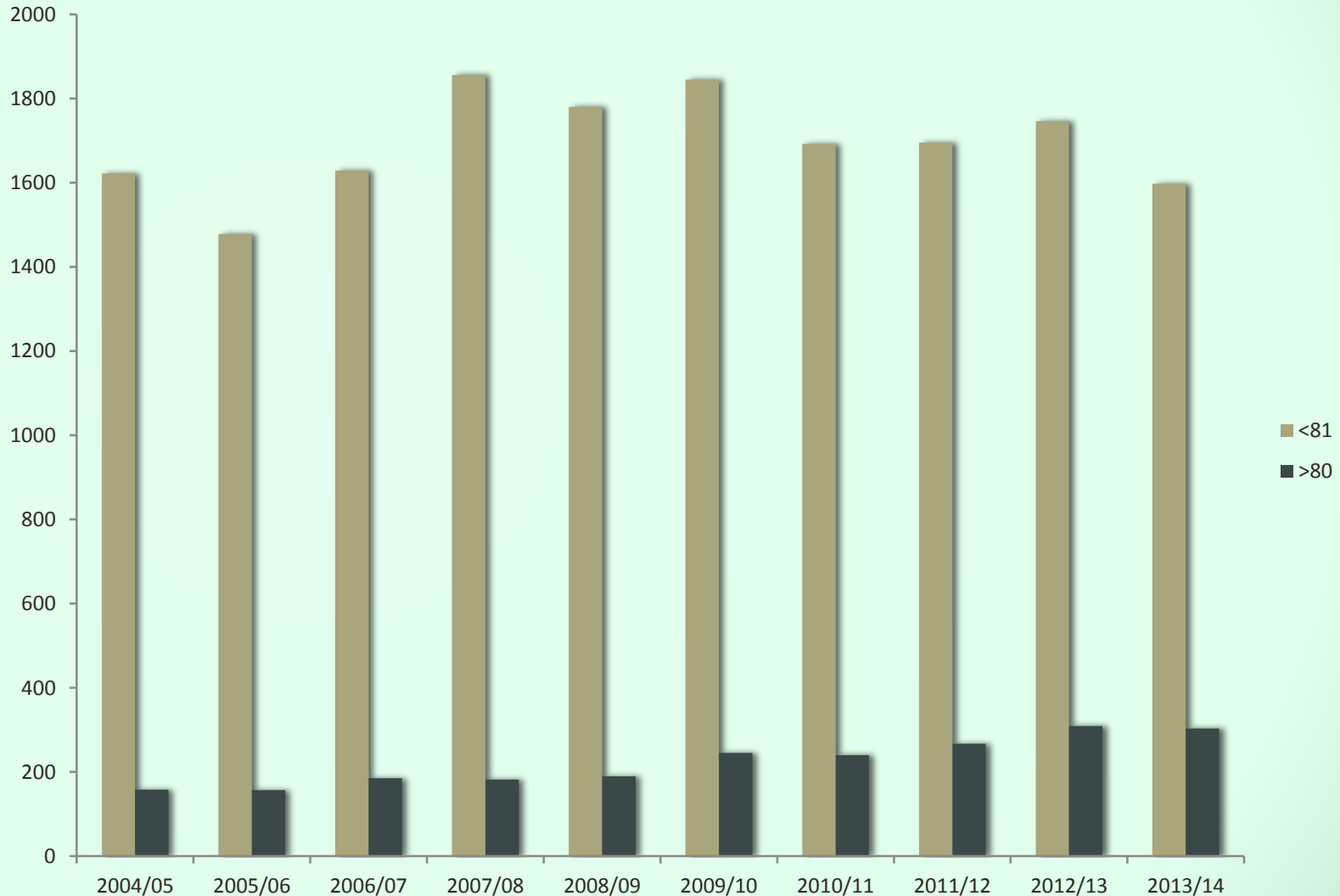




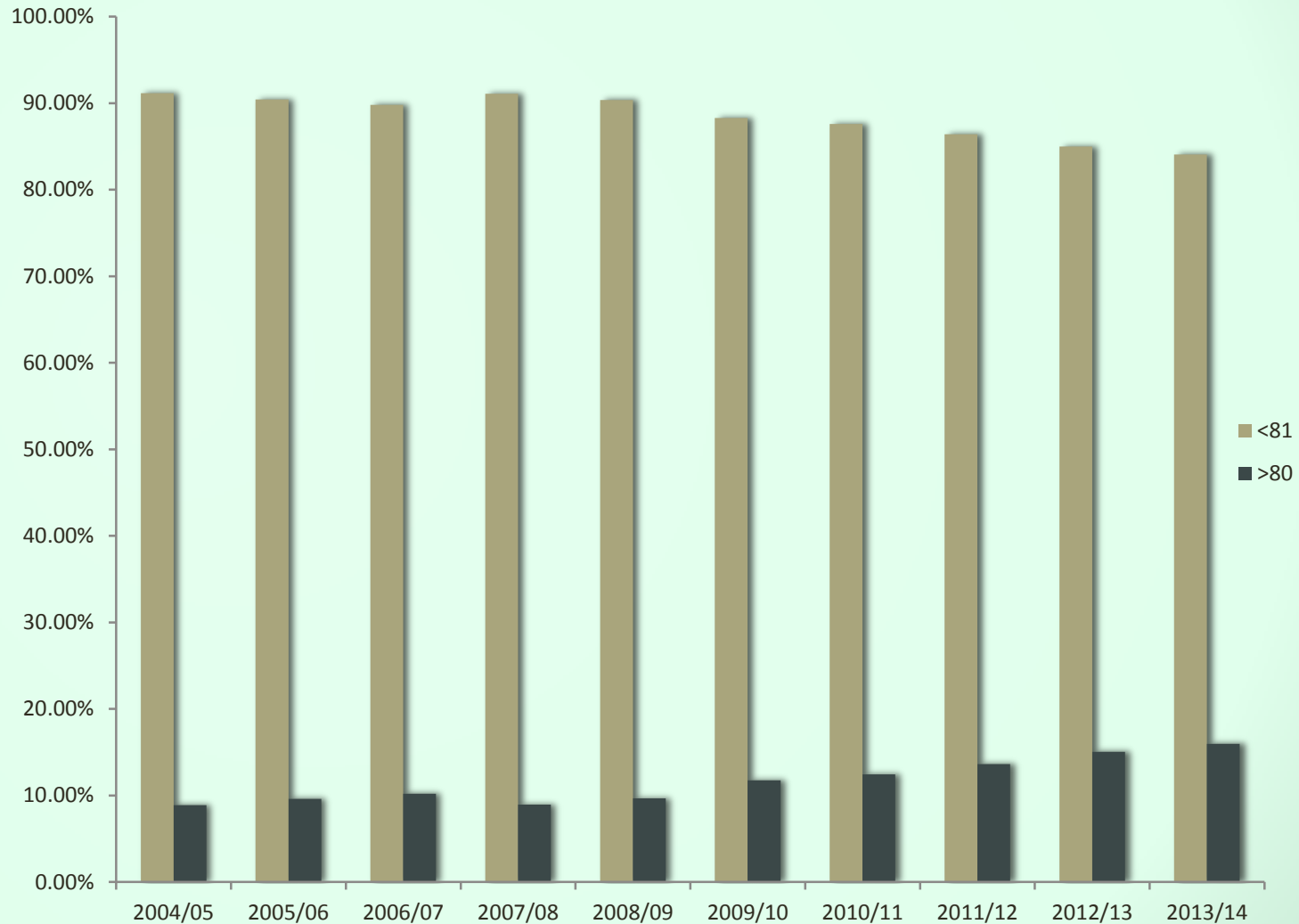
Papworth



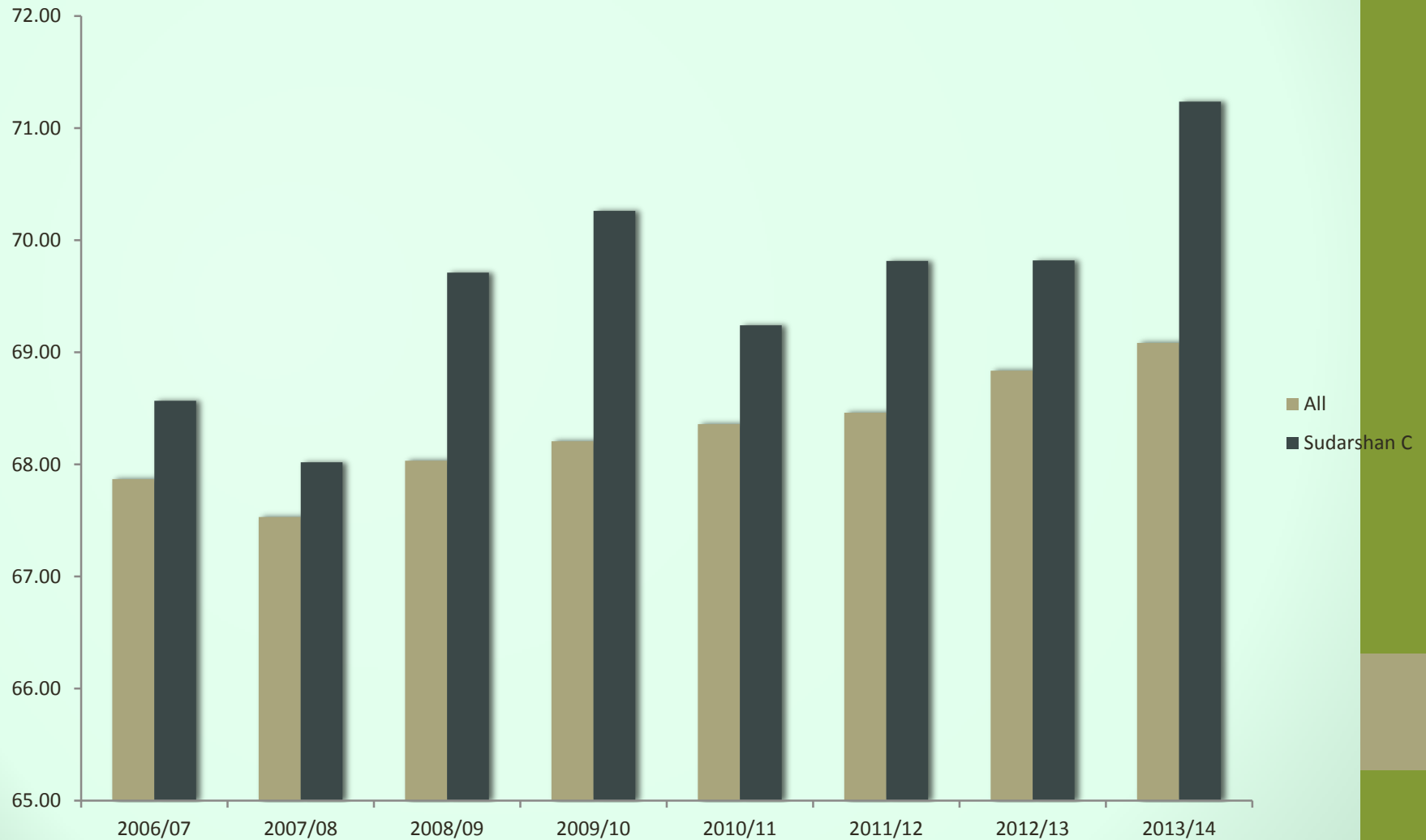
Trend of age over the years



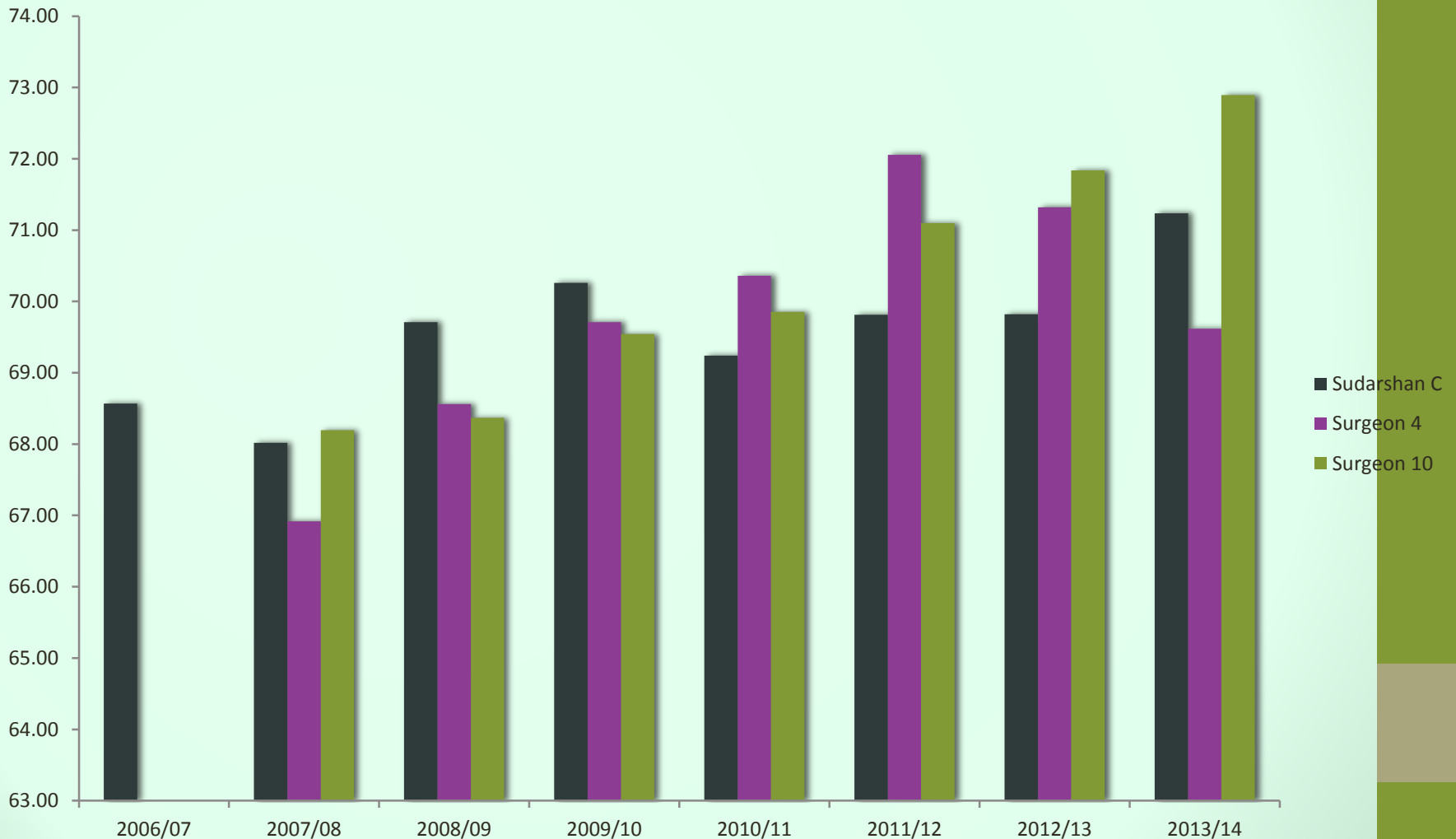
Trend of age over the years



Average age of patients



Average age of patients



Papworth Experience

- Total : 1986 patients
- Duration: 13 years (Mar 1996 –Jul 2009)
- Elective : 69%(1373); Urgent : 23%(460); Emergency: 8%(153)
- Median age: 82 years- (range 80- 96 yrs)
- Male -59% (1169); female – 41% (817).

Operative procedures

- CABG: 736
- Isolated Valve surgery : 509
- Isolated valve + CABG : 534
- Double valve surgery +/- additional procedures : 69
- Aortic surgery: 53.

Double valve & additional procedures (69)

- Median age : 82 yrs (80-96)
- Sex : male – 37, female – 32.
- Elective: 80%(55); Urgent: 12;Emergency:2.
- Redo cardiac surgery:2
- AF: 67%(46).

Risk stratification (DVR)

- Pulmonary hypertension : 26% (18)
- Previous MI: 17% (12)
- Raised creatinine: 33%(23)
- Transient neurological dysfunction: 10%(7)
- LV function: Good – 38% (26)
 - Moderate- 54% (37)
 - Poor – 8% (6)

Operations – DVR - 1

- AVR + MV surgery: 25
- AVR + MV surgery & additional procedures: 15
- MV surgery + TV repair: 13
- MV surgery + TV repair & additional procedures: 6
- AVR + MV surgery + TV repair +/- CABG: 8
- AVR + TV repair +/- CABG: 2

Operations – DVR - 2

- Median Cardio Pulmonary Bypass time: 114 (58 - 400)
- Median cross clamp time: 90 (24 - 198)
- Median logistic Euro score: 12.31 (6.6 – 68.4)
- Median Euro score: 9 (6 - 17)

Statistics

Variables	p - Value
Age	0.29
AF	0.74
COPD	1.00
High PAP	0.46
Tricuspid surgery	1.00
CPB	0.80
X-clamp	0.49
Logistic EURO	0.14

Outcome

- Median ICU stay: 2 days(1 -14)
- Median Hospital stay: 12 days (5 - 48)
- Hospital mortality: 16% (11)

Outcome

- In hospital mortality is higher than predicted by logistic Euroscore in this cohort.
- Acceptable CCA & Hospital stay post operatively.
- Significant improvement in functional status in the survivors. 77% of survivors in better NYHA and CCS classes.
- Further scope for a future specialty among surgeons for “ Geriatric cardiothoracic surgery” ?

Summary - old age

- In unavoidable
- Expectations of the elderly and their treating physicians are higher – quality than quantity
- Advancement in technology
- Massive use of resources

Summary – old age

- Rational and pragmatic approach to the care
- Careful selection of patients
- Clear criteria set up prior to embarking on treatment
- Better and awareness amongst primary health care teams
- Realistic expectations amongst all

Let's not do something just
because we can.....

But,.....

Do it because we **SHOULD**

Thank you