



PCI in Asia Pacific Region

Angioplasty Summit
TCT Asia Pacific 2006
27th April 2006

PCI in Asia Pacific Region

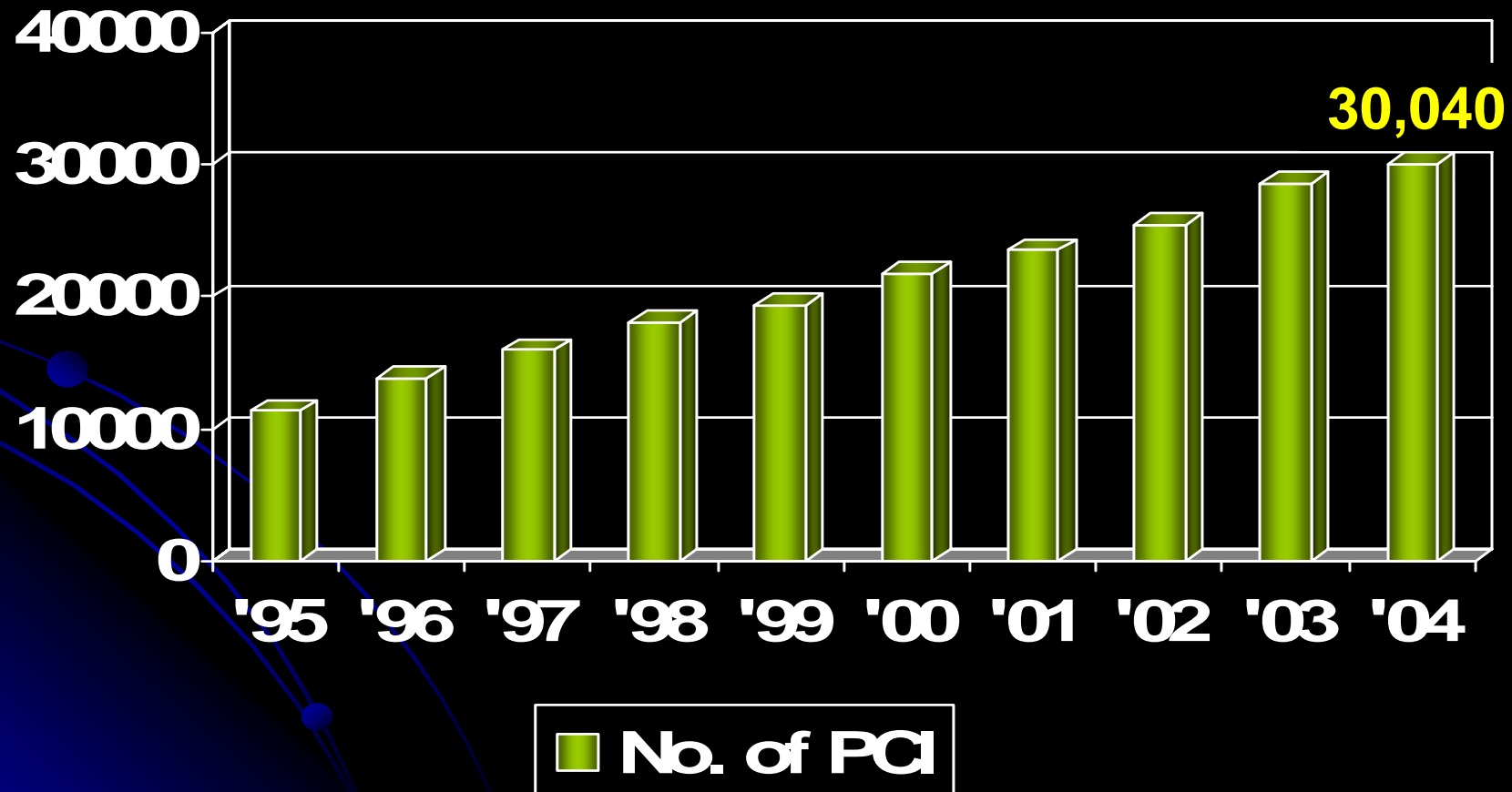


AUSTRALIA

Started 1981

Population: 20.5 million

Growth of PCI



AUSTRALIA

Population in mid 2004 : 20.5 million

Australia & New Zealand

Number of Cases in 2004: PCI ~ 35,000

Number of stents: 53000

Number of stents per pt 1.4 to 1.7 per pt

Number of stents in 2004: BMS 23000

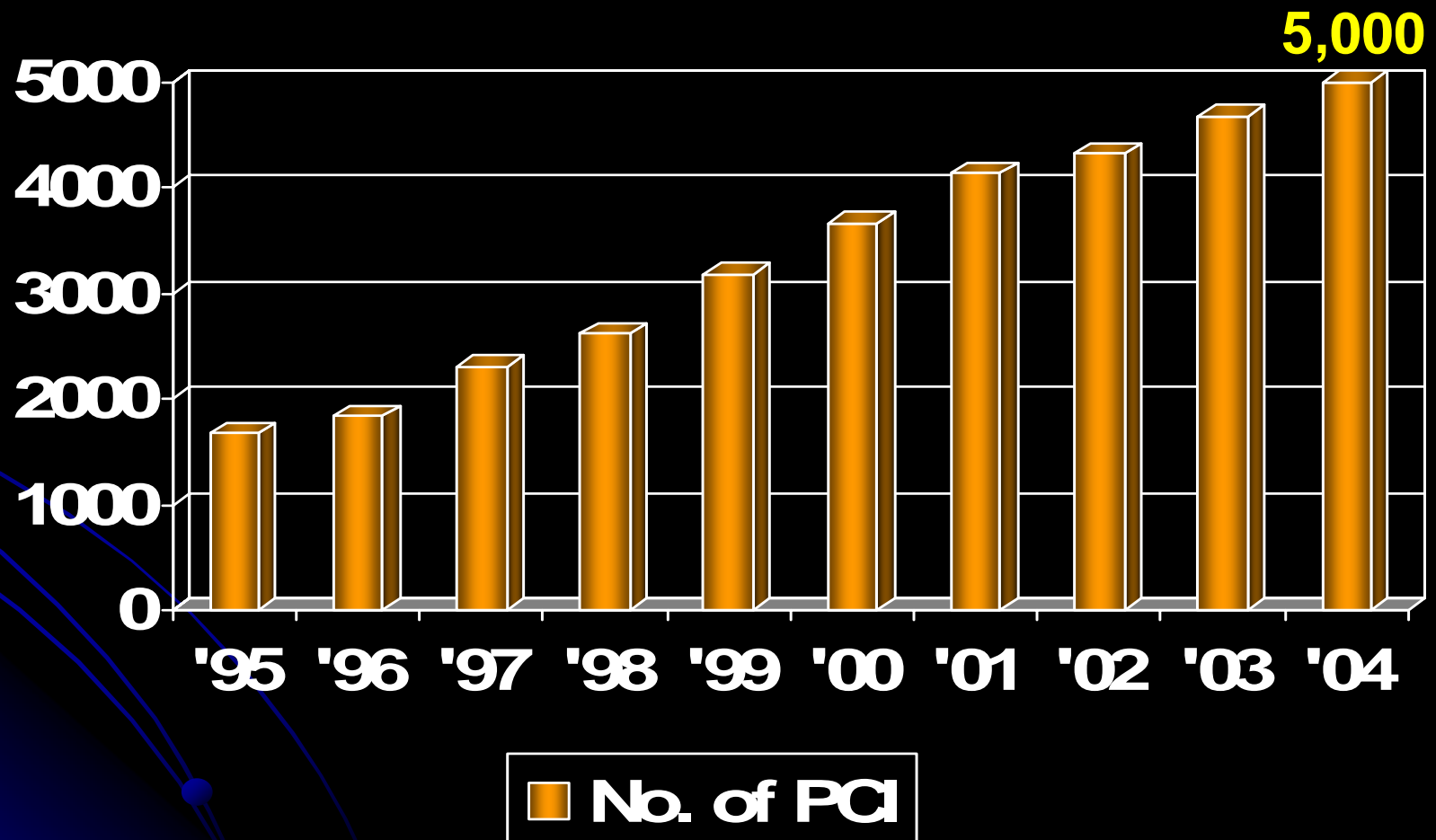
DES 30000 = **56.6%**

PCI institutions 85

NEW ZEALAND

Started 1981
Population: 4.1 million

Growth of PCI



NEW ZEALAND

Population in mid 2004 : 4.1 million

Number of Cases in 2004: 4948

Number of stents in 2003: BMS 6000

DES 922 = **13.3 %**

Number of centres in 2004: 11

Number of Interventionalists: 30

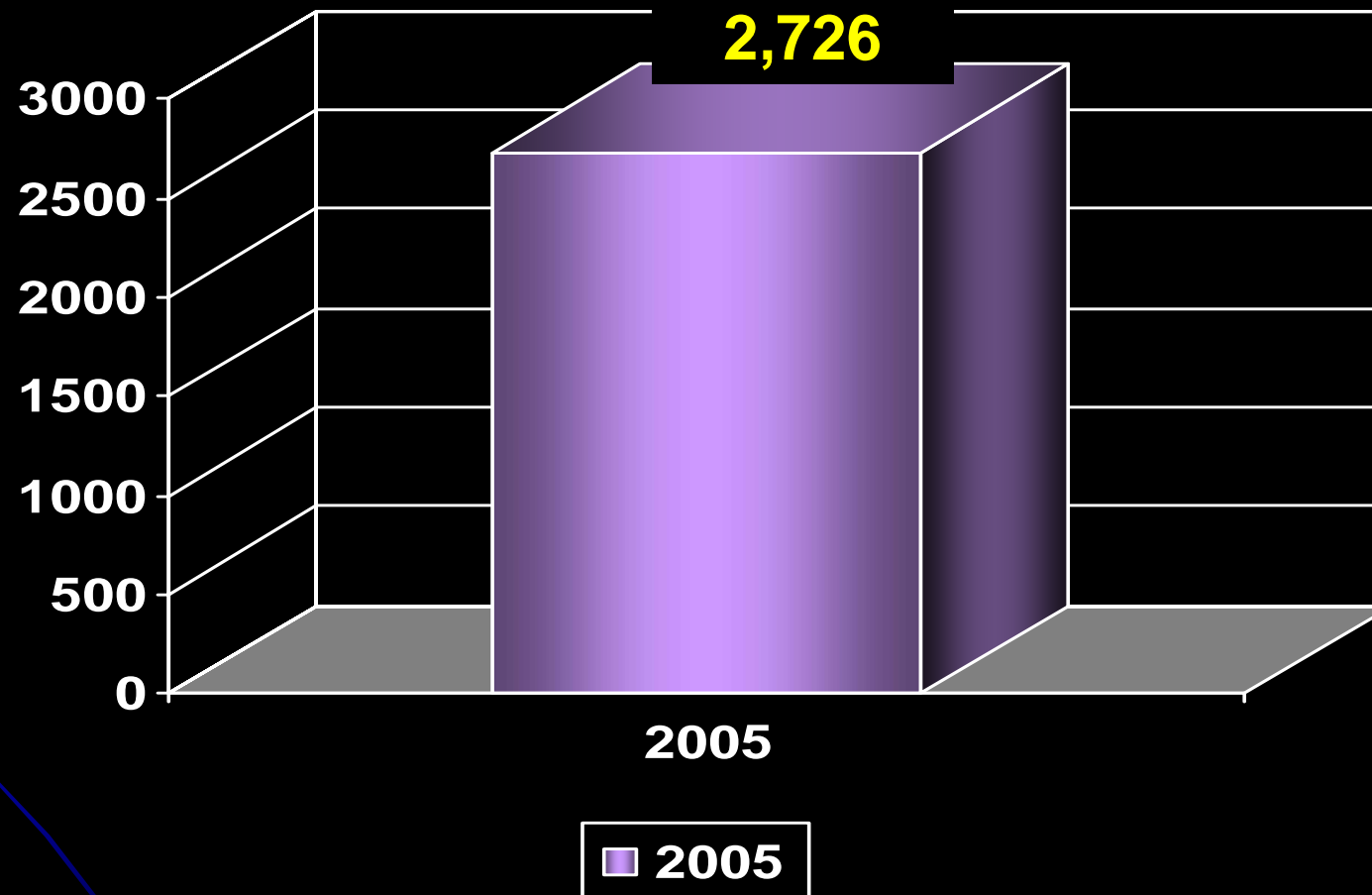
Who performs peripheral intervention: Mostly Radiologists

Some renal, carotid & stenting by Cardiologists

BANGLADESH

Started 1995

Growth of PCI



Dr. Sufia Rahman

BANGLADESH

Number of Cases: 2726 [2004]

Number of stents: 3913

Number of DES: 926

Number of centres: 11

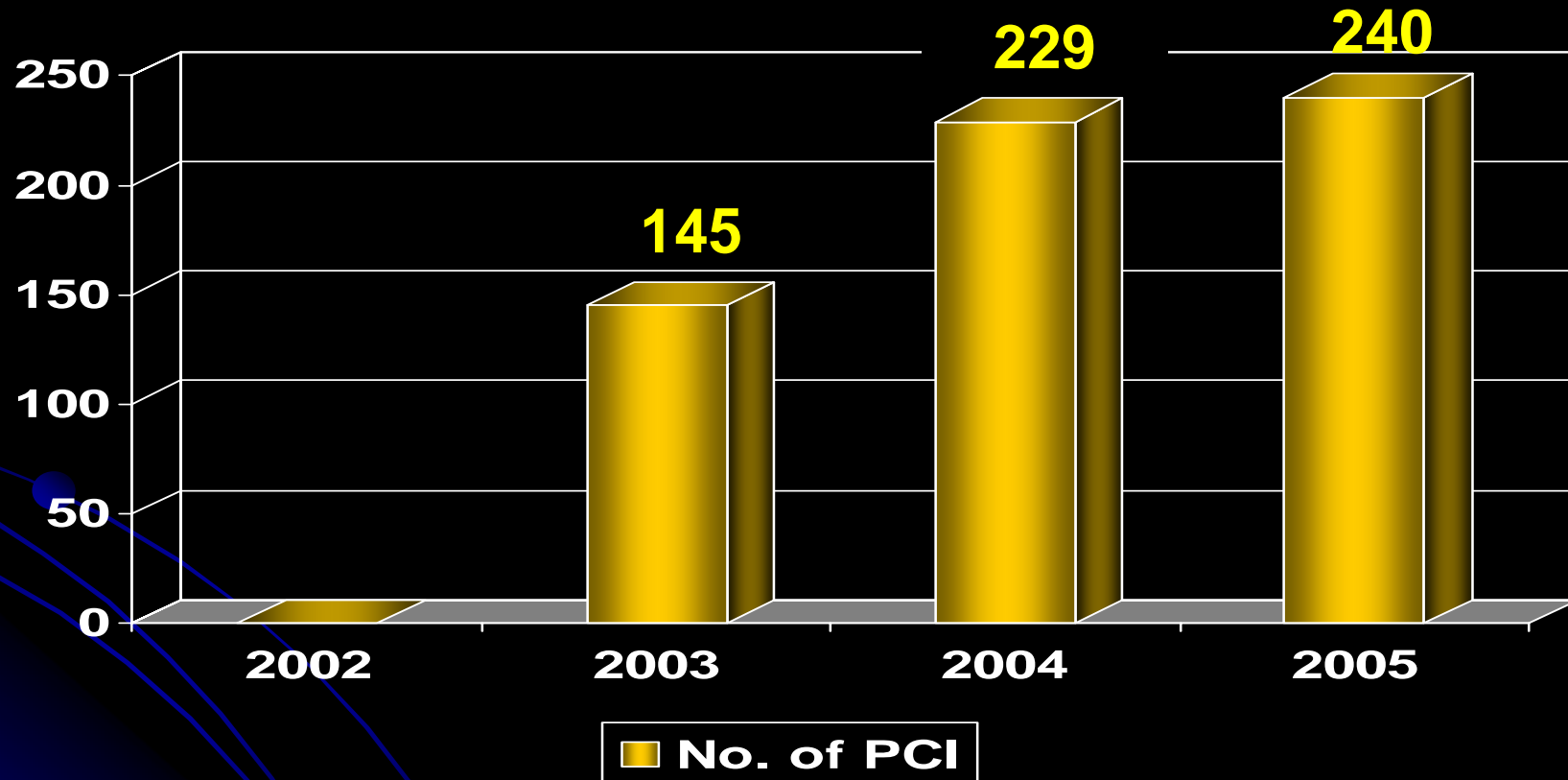
Number of Interventionalists: 25

Number of peripheral intervention: 510

BRUNEI

Started in 2003

Population: 383,744



Dr. Patrick Ang
drpatrick_ang@gleneaglesjpmc.com.bn

BRUNEI

Population 2004 : 383,744

Number of centres: 1

Number of Interventionalists: 1

Stents/ patient : $397/240 = 1.65$

Drug-Eluting Stents

Cypher (Sirolimus-Eluting Stent)

Aug 2004

Taxus (Paclitaxel-Eluting Stent)

May 2003

% DES **95% in 2004**

96.5% in 2005

DES for all cases except

Large vessels > 3.5mm

Who performs peripheral intervention:

Renal: Interventional Cardiologist

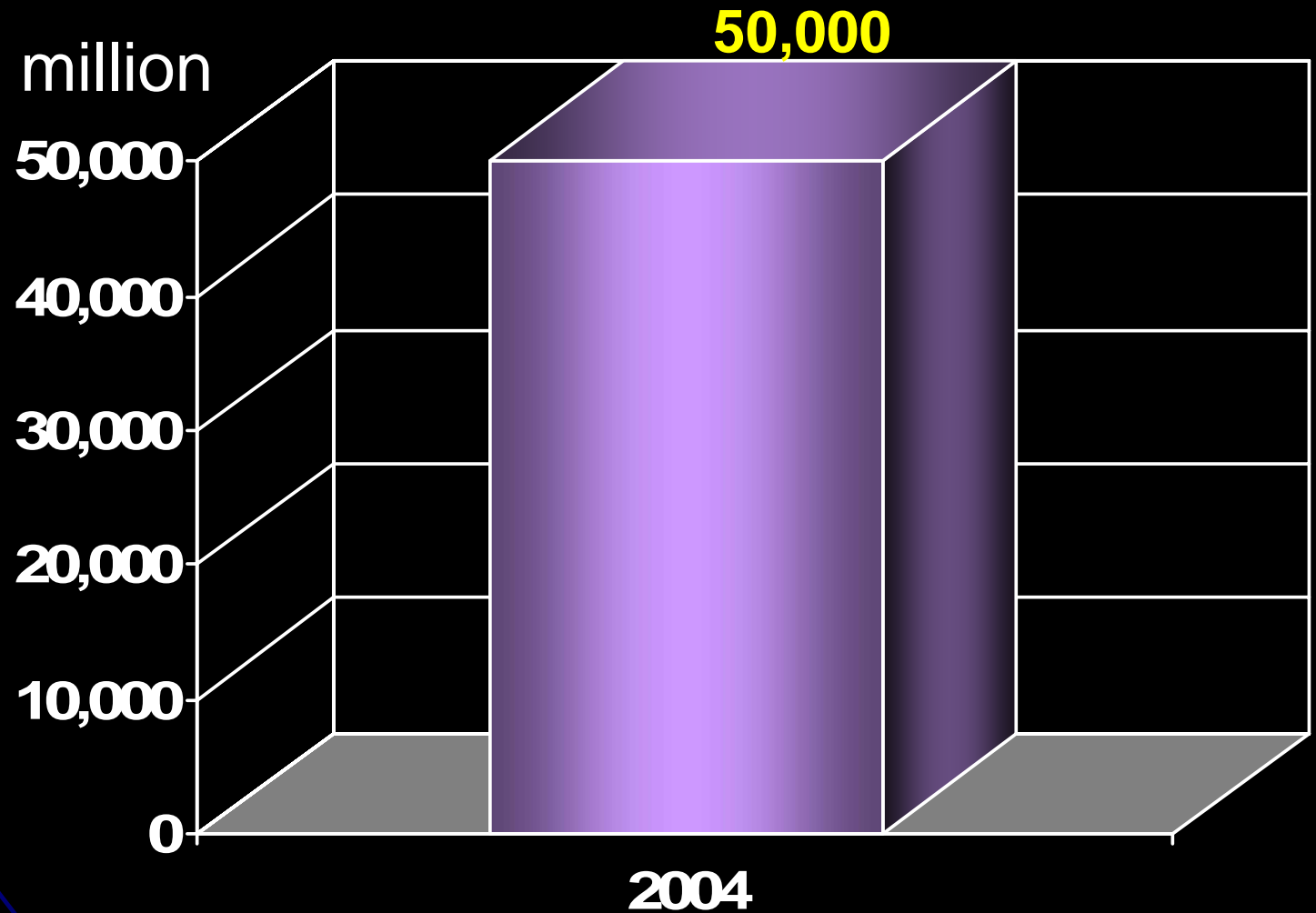
Iliac: Interventional Cardiologist

CHINA

Started 1984

Population: 1,300.1 million

Growth of PCI



CHINA

Population in mid 2004 : 1,300.1 million

Number of Cases a year: ~ 50,000 [2004]

Number of BMS: ~ 54,000

Number of DES: ~ 36,000 ~ 40%

Number of centres: ~ 250

• Number of Interventionalists: ~ 500

Who performs peripheral intervention: Cardiologists

Radiologists

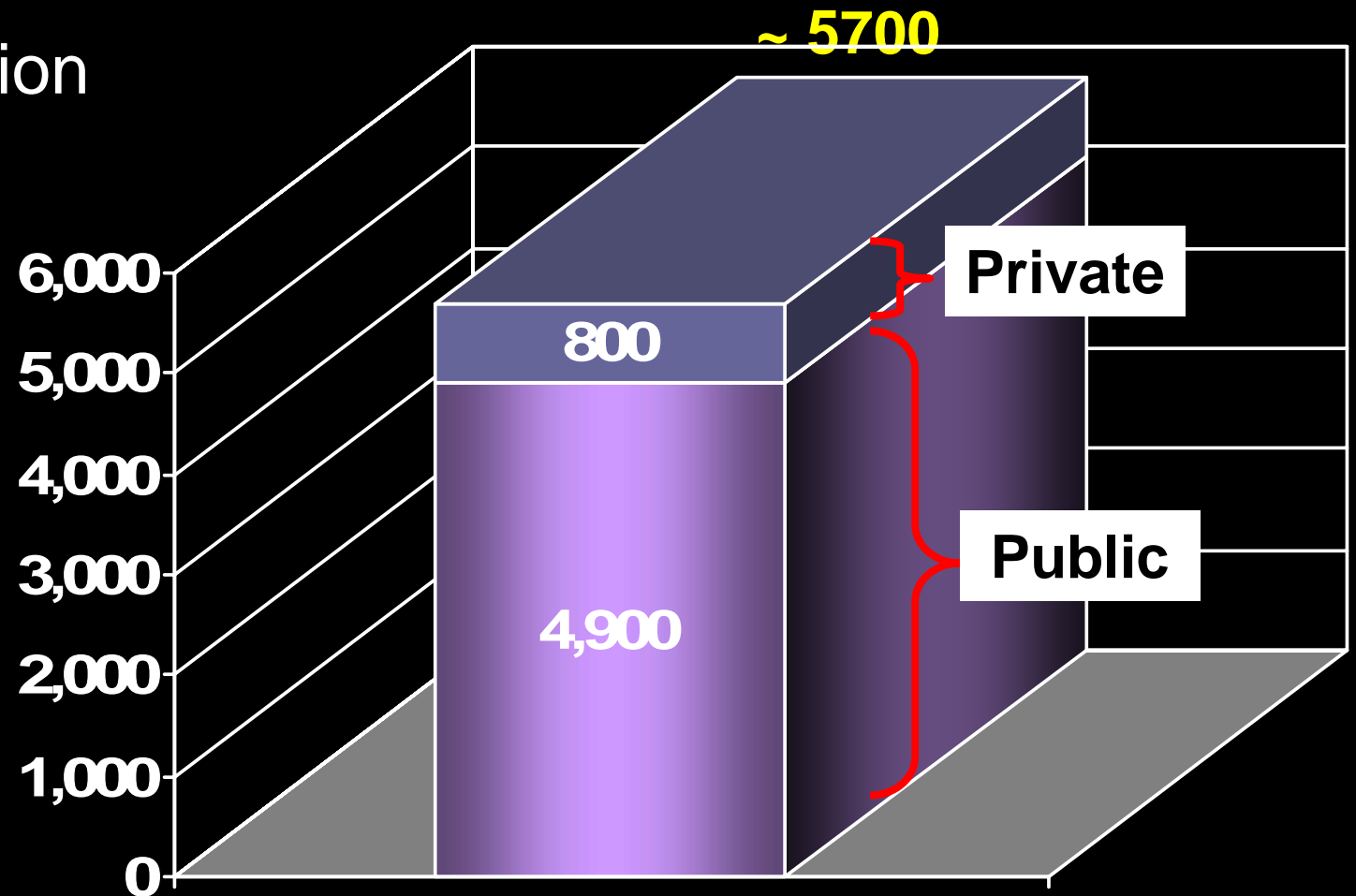
Neurologists

HONG KONG

Started 1984

Population: 6.8 million

Growth of PCI in 2004



Public Private

HONG KONG

Population 6.8million

Number of centres: 10 cath labs in public hospitals
5 cath labs in private sector
(8 centres annual case volume <150)

Number of Interventionalists: 100
[not many are high volume operators]

Who performs peripheral intervention:
interventional cardiologists
interventional radiologists

Audit: Complication rate: Overall mortality 0.6%
All-cause Complications 1.8%

HONG KONG

Drug-Eluting Stents

% DES

almost 100% in private practice

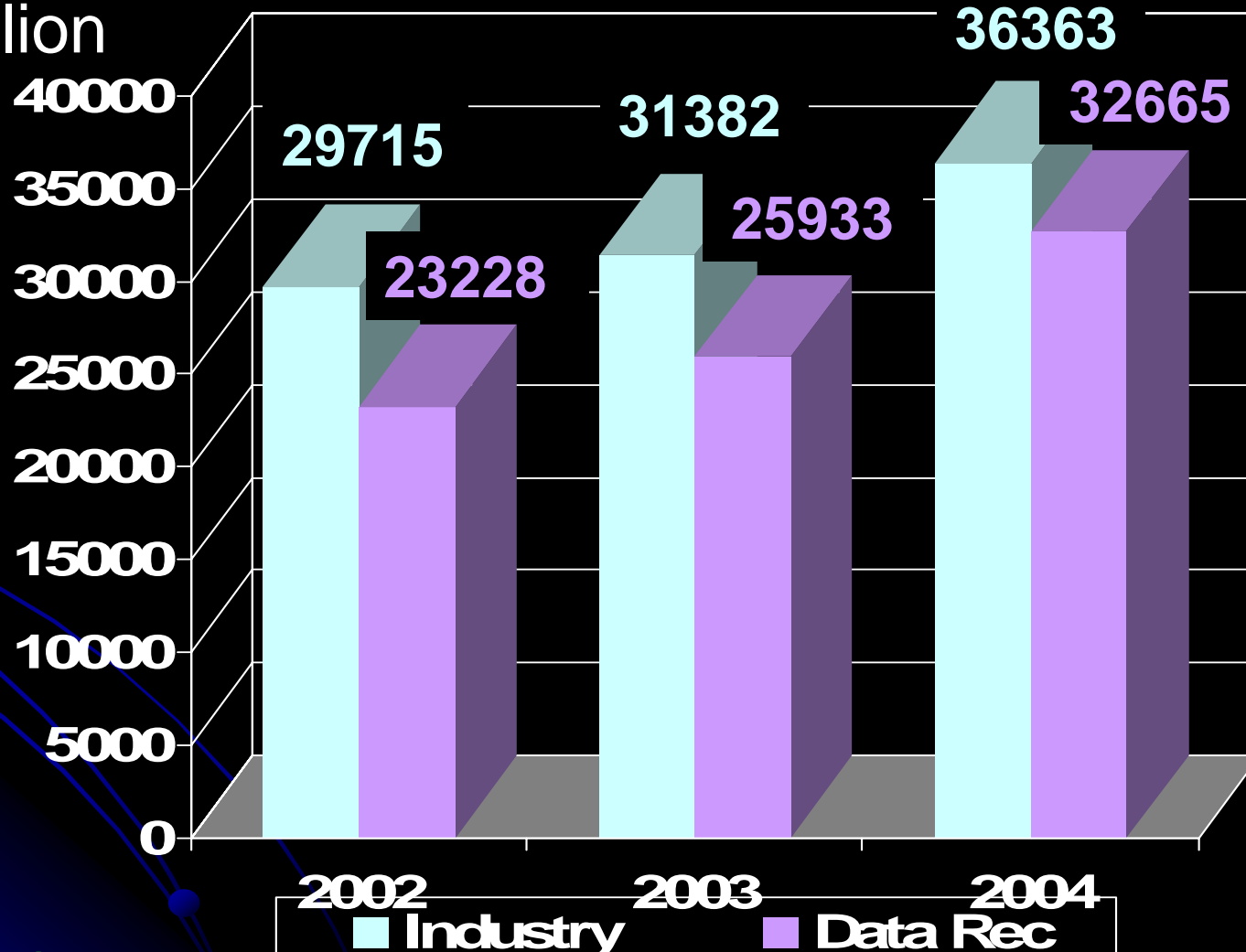
~ 60% in public sector

INDIA

Started 1985

Population:

1,086.6 million



Interventional Council of India

INDIA

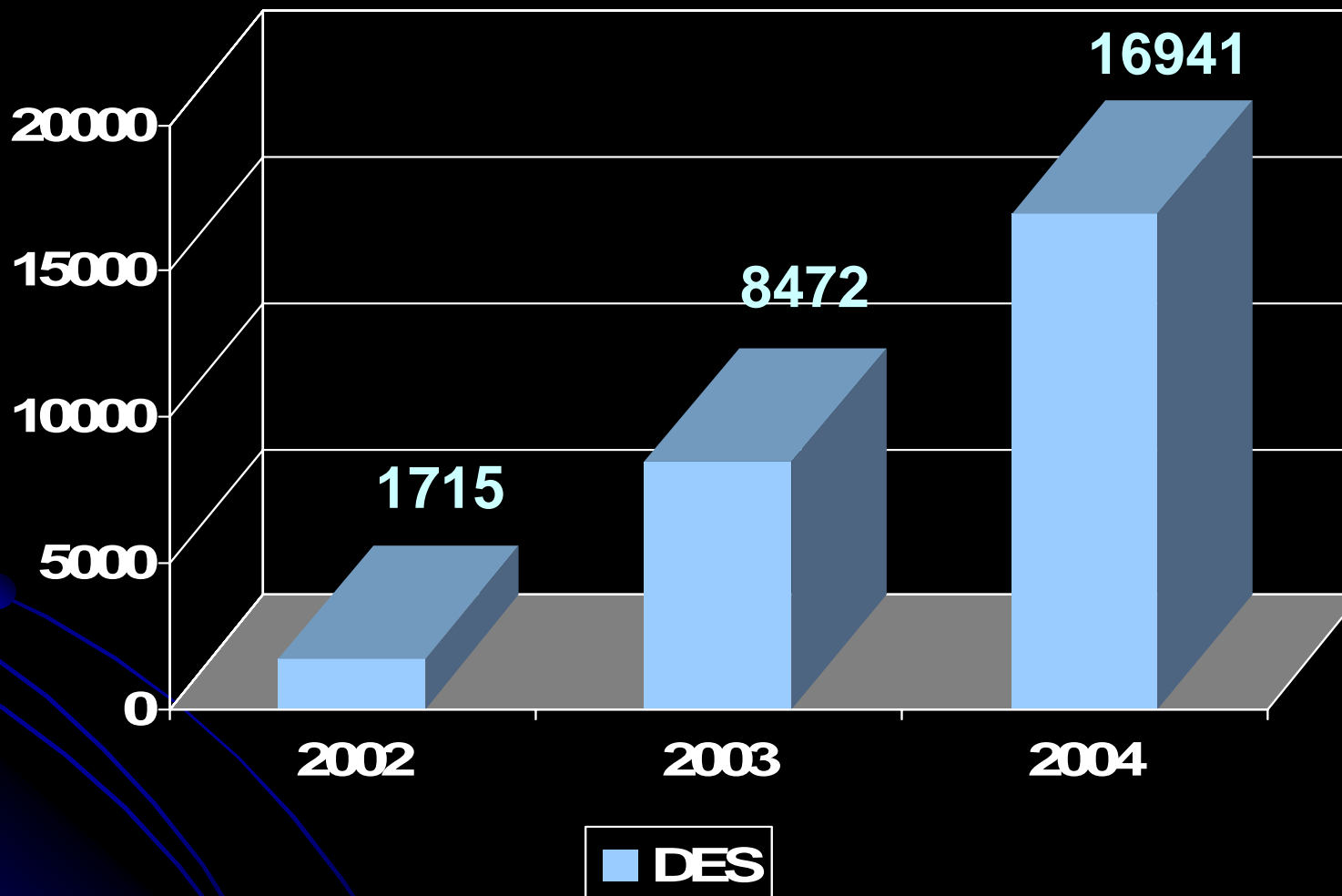
Population 1086.6million

Number of centres: 86

Audit: Complication rate: Overall mortality 0.6%
Complications 1.8%

INDIA

DRUG ELUTING STENTS

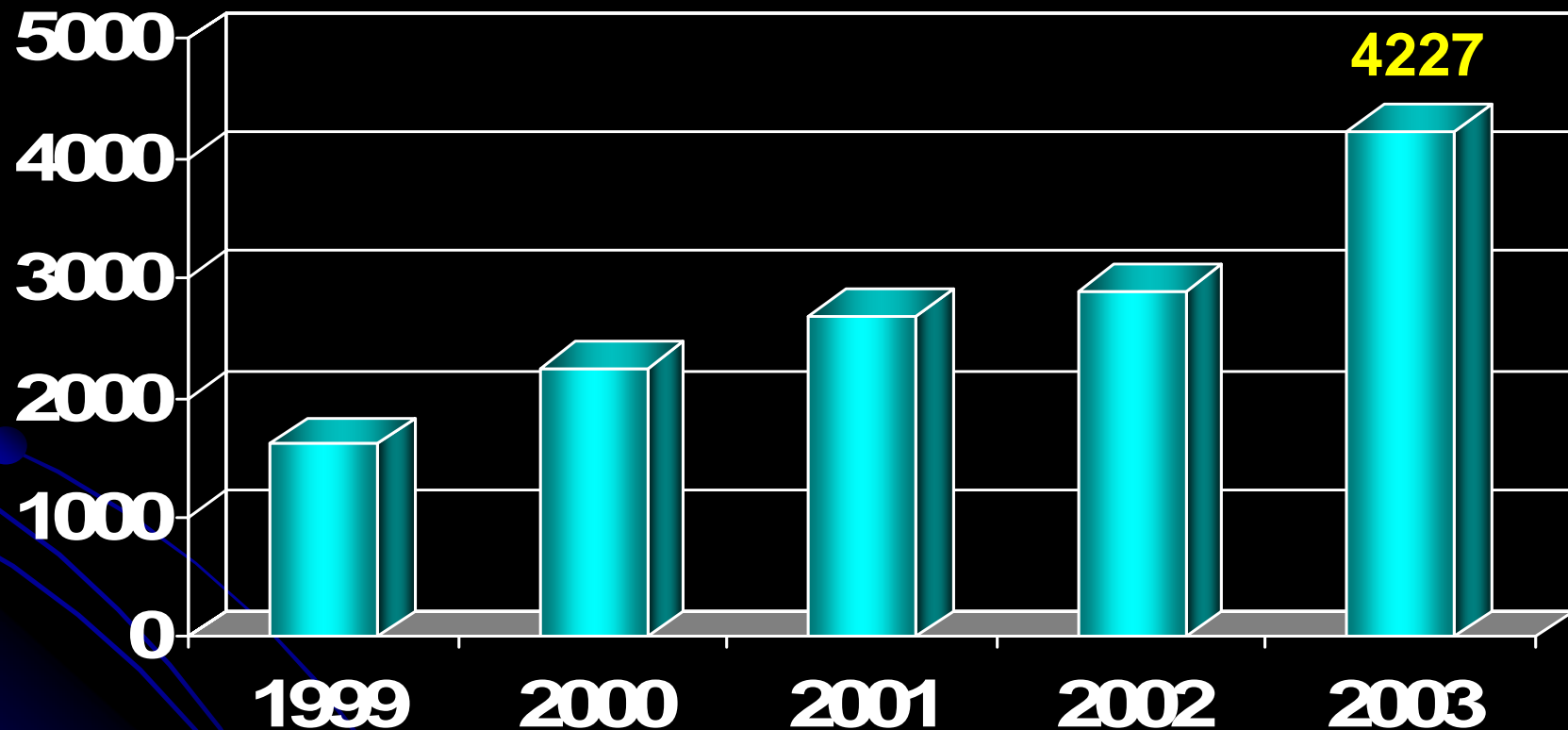


INDONESIA

Started 1987

Population: 219 million

Growth of PCI



■ No. of PCI

INDONESIA

Population 219 million

Indonesian Association of Interventional Cardiology

Number of centres: 12

(8 centres annual case volume <150)

Number of Interventionalists: 25 – 30

Who performs peripheral intervention:

Carotid: Interventional Cardiologist (1 centre)

Renal: Interventional Cardiologist

Interventional Radiologist

Aorto-Iliac: Interventional Cardiologist

Interventional Radiologist

Iliac: Interventional Cardiologist

Interventional Radiologist

Aortic Aneurysm: interventional Cardiologist (1 centre)

INDONESIA

Drug-Eluting Stents

Cypher (Sirolimus-Eluting Stent)

July 2002

Taxus (Paclitaxel-Eluting Stent)

June 2003

Excel (Sirolimus-Eluting Stent)

January 2004

Infinium (Paclitaxel)

April 2004

% DES **60% to 70%** in private practice

30% to 40% in public sector

1. " if cost not an issue, in most except in
SVGs

Large vessels > 3.5mm"

2. Highly restenotic lesions: Small vessels

Long lesions

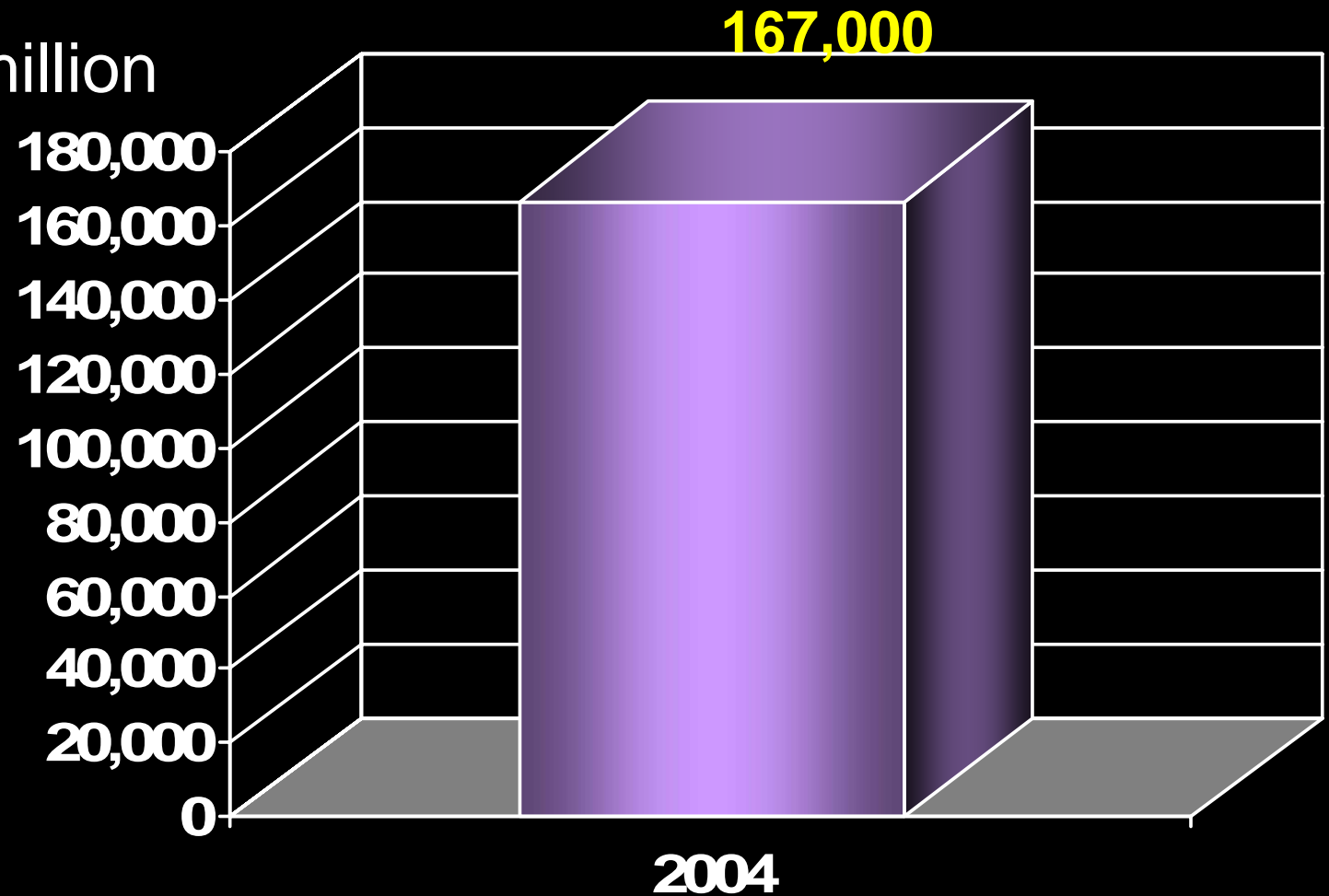
Diabetics

JAPAN

Started 1981

Population: 127.6 million

Growth of PCI



JAPAN

Population in mid 2004 : 127.6 million

Number of Cases a year: 167,000 [2004]

70% of cases receive stents

70% of stents are Cypher

Number of centres: 1,300

Number of Interventionalists: 2,500 - 3,000

Who performs peripheral intervention: Cardiologists

Neurosurgeons

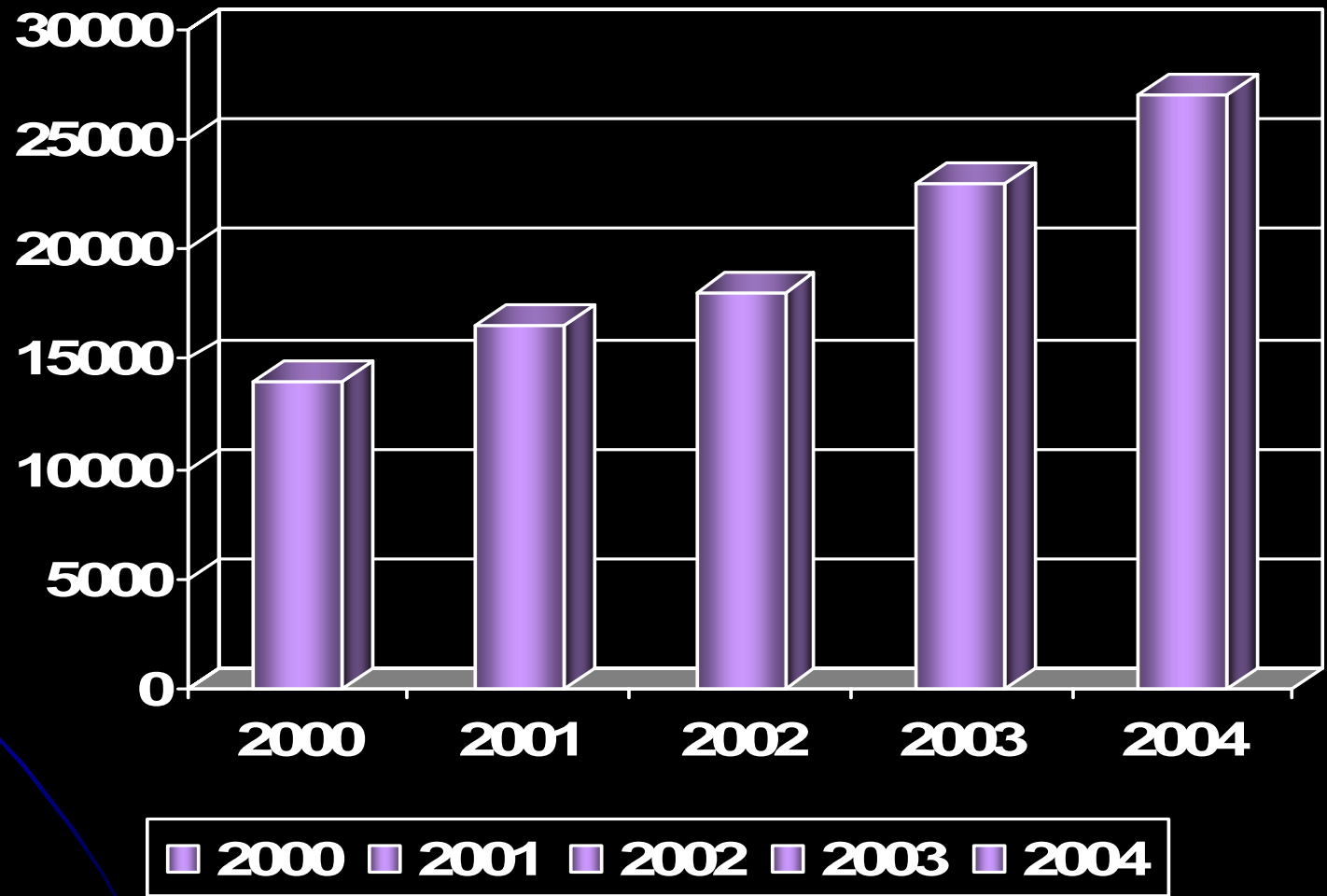
Radiologists

Korea

Started 1983

Population: 48.2 million

Growth of PCI



Korea

Population in mid 2004 : 48.2 million

Number of Cases a year: 27,000 [2004]

68% of PCI was DES in 2003

97% of PCI was DES in 2004

Number of centres: 89

Number of Interventionalists: 258

Who performs peripheral intervention:

Carotid: Interventional Cardiologist

Renal: Interventional Cardiologist / Interventional Radiologist

Iliac: Interventional Cardiologist / Interventional Radiologist

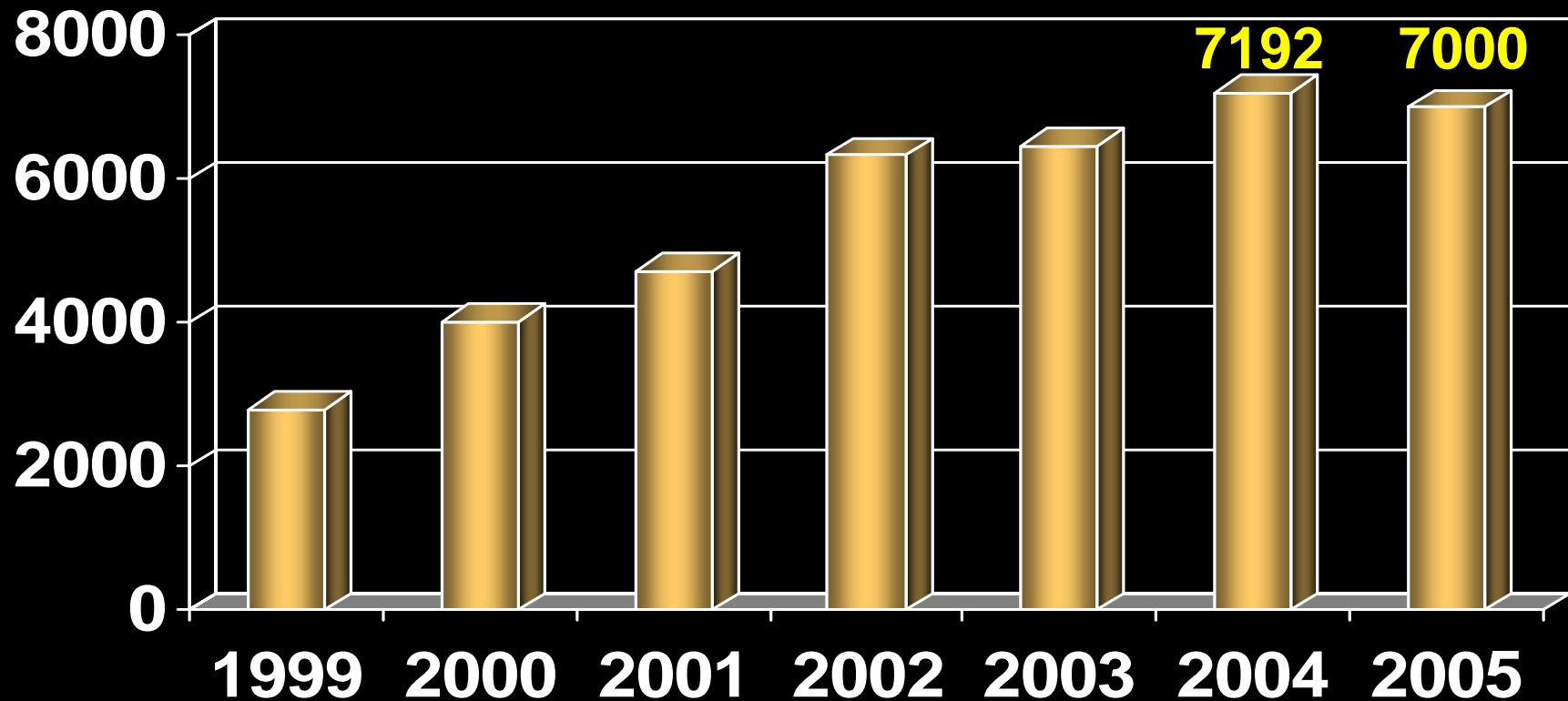
Femoral : Interventional Cardiologist / Interventional Radiologist

Subclavian : Interventional Cardiologist

MALAYSIA

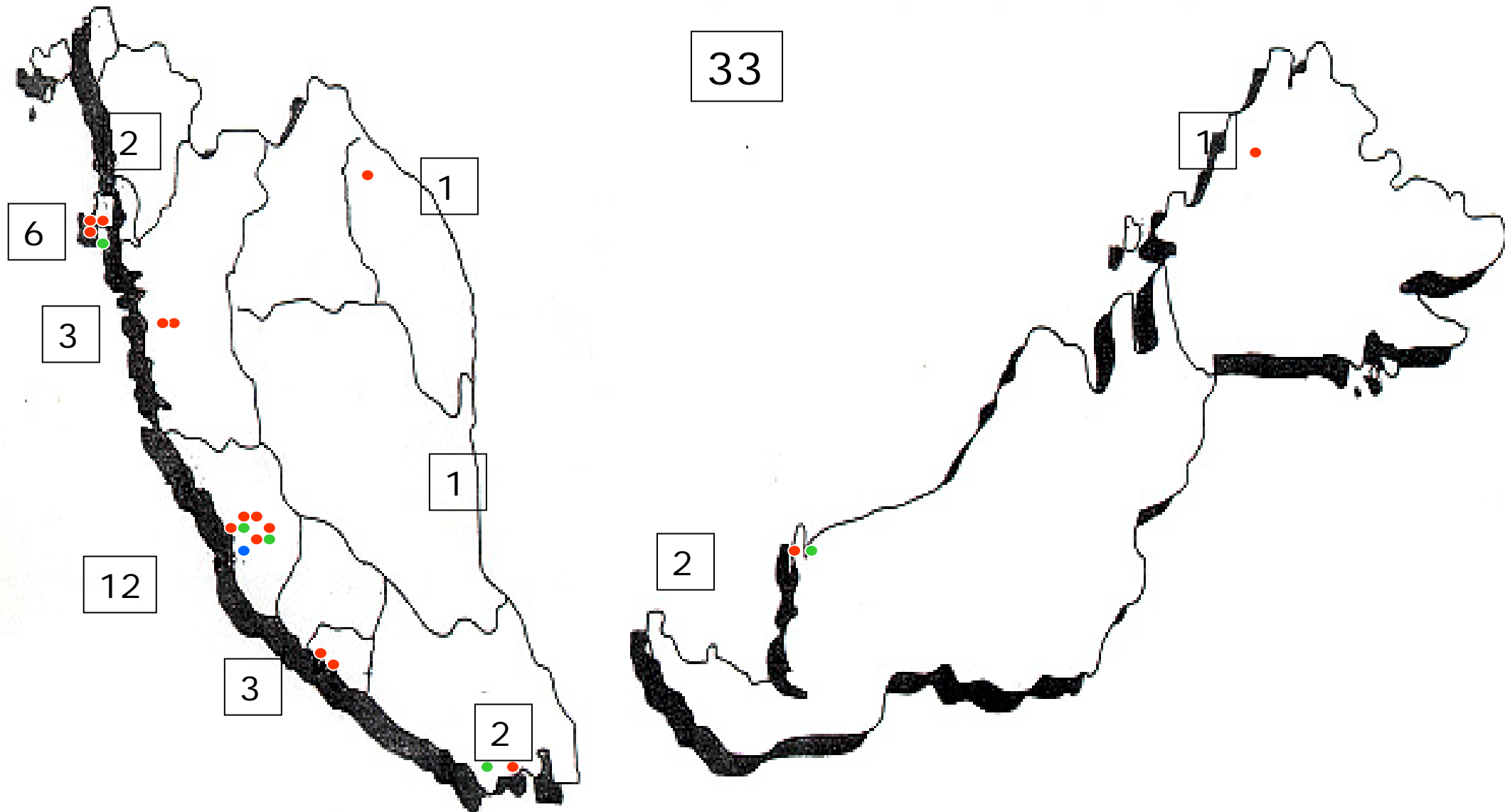
Started 1984

Population: 26.5 million **Growth of PCI**

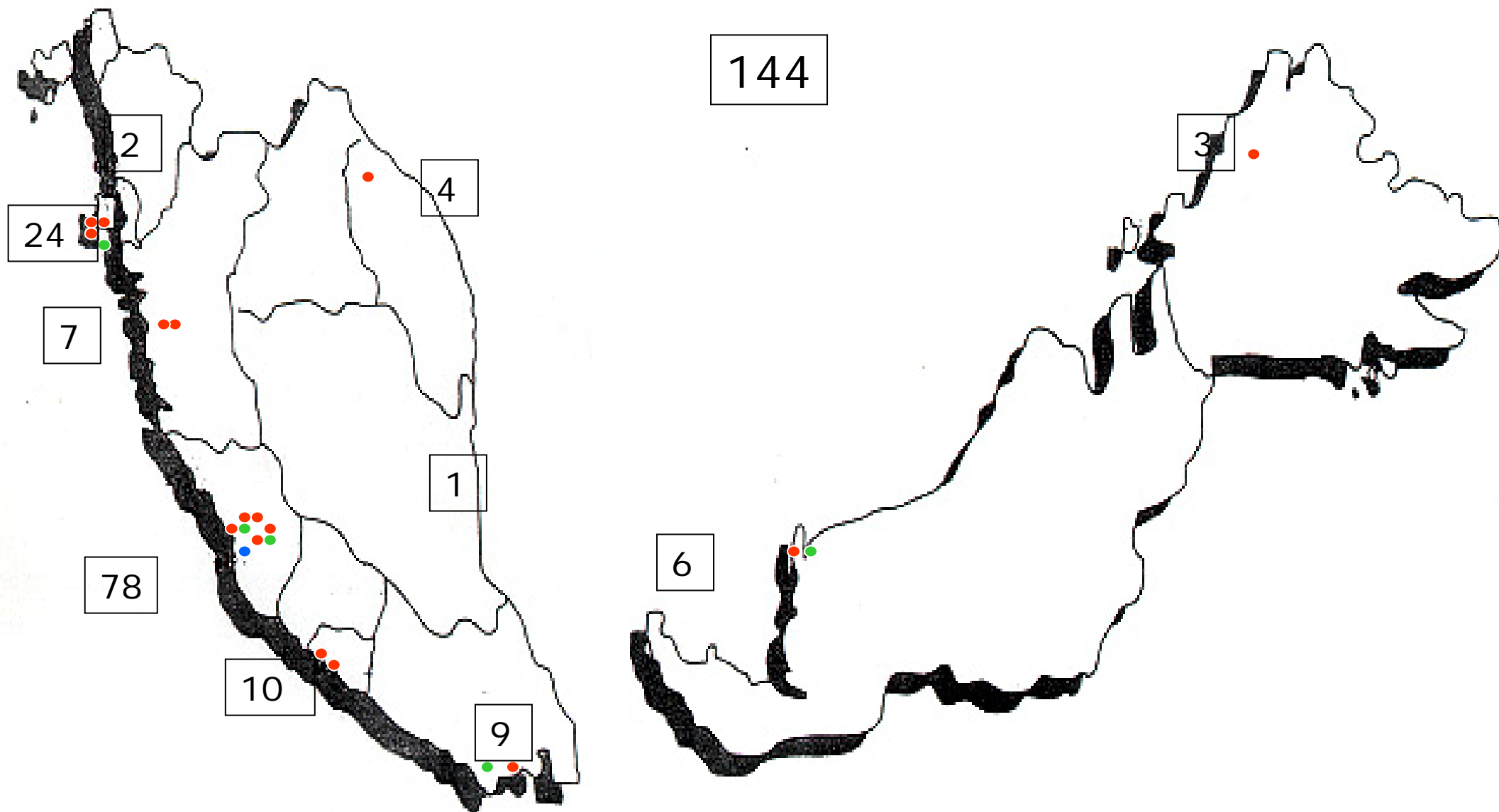


■ No. of PCI

Cardiac Services with Invasive Cardiology and Cardiac Surgery 2005



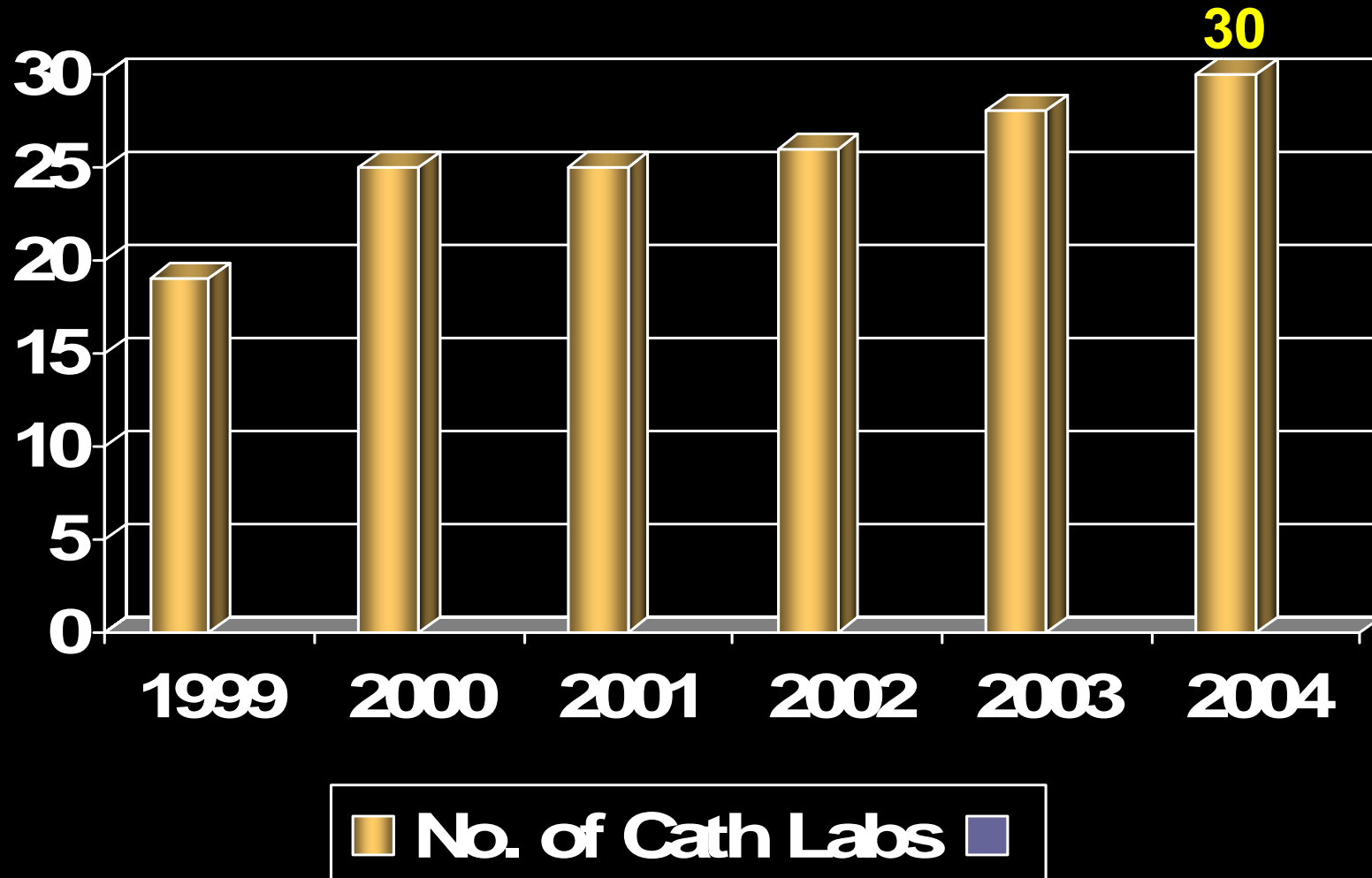
Total No of Cardiologist in Malaysia - 2005



MALAYSIA

Started 1984

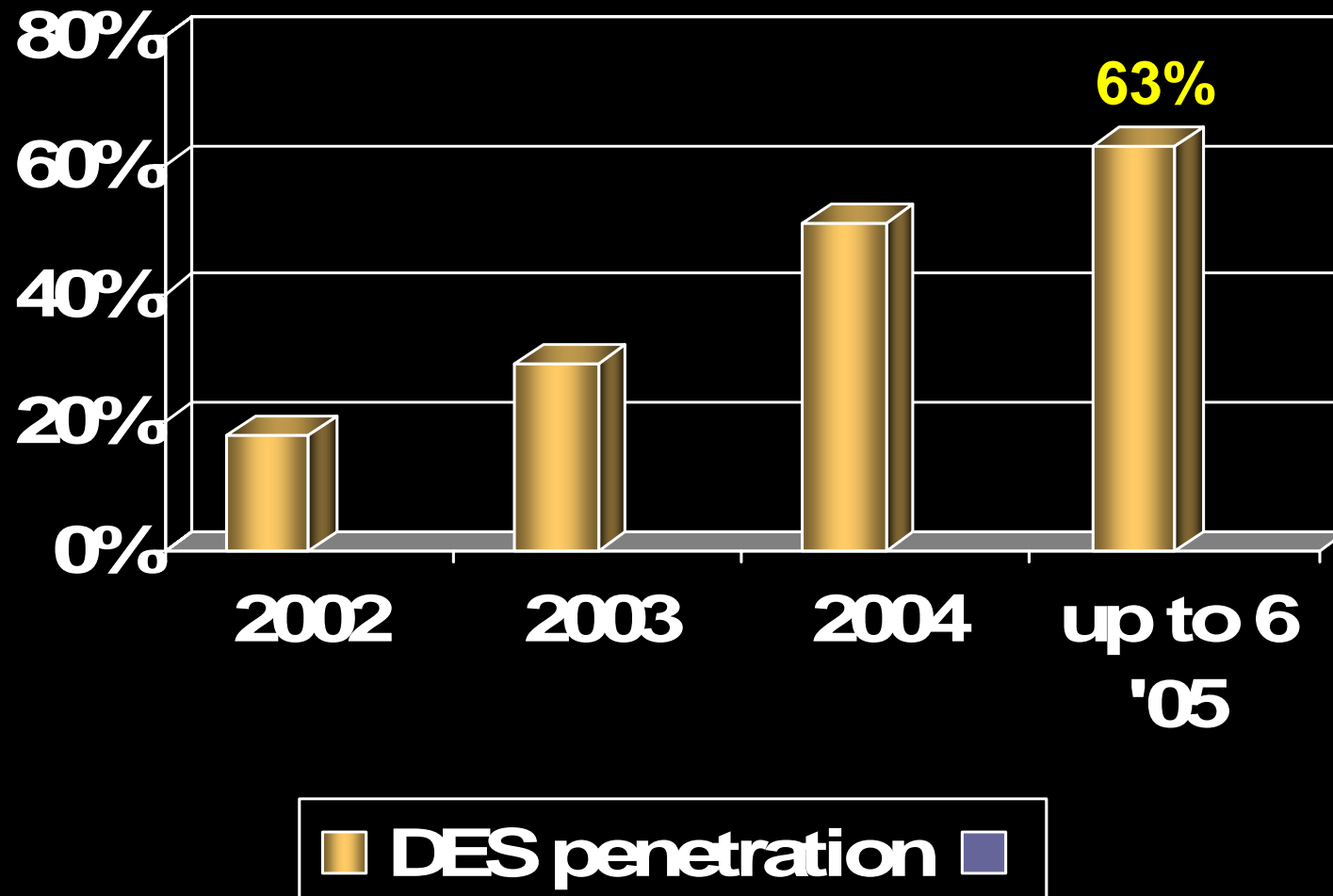
Growth of Cath Labs



MALAYSIA

Started 1984

DES Penetration



MALAYSIA

Population in mid 2004: 26.5 million

Interventional Cardiovascular Society of Malaysia (ICSM)

Number of Centres: 33

Number of Interventionalists: 144

Who performs peripheral intervention:

Carotid: Interventional Cardiologist/Radiologist

Renal: Interventional Cardiologist/Radiologist

Aorto-Iliac: Interventional Cardiologist/Radiologist/ Vasc Surgeon

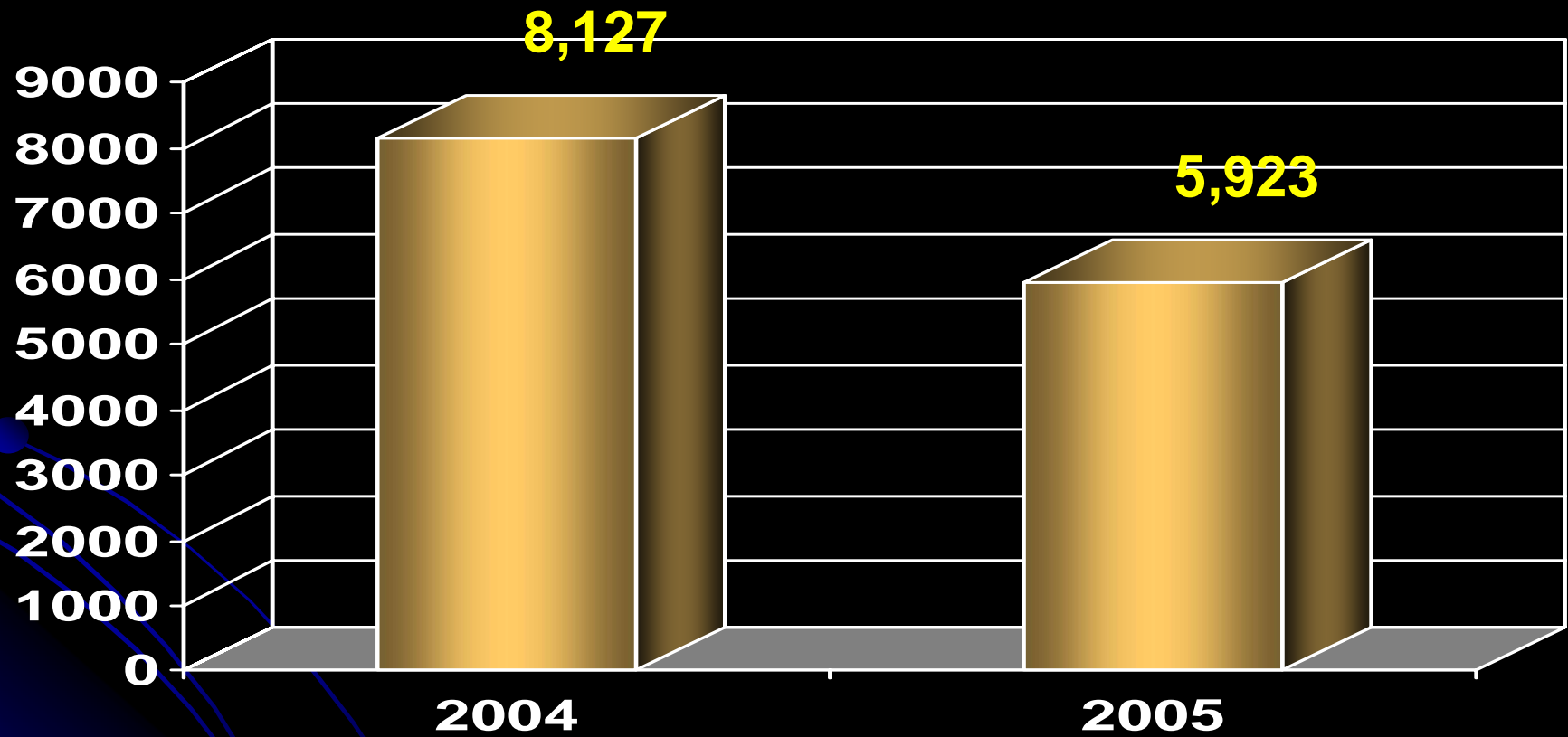
Iliac: Interventional Cardiologist/Radiologist/ Vasc Surgeon

Aortic Aneurysm: Interventional Cardiologist/Radiologist/ Vasc Surgeon

PAKISTAN

Started 1985
Population: 159.2 million

Growth of PCI



■ No. of PCI

PAKISTAN

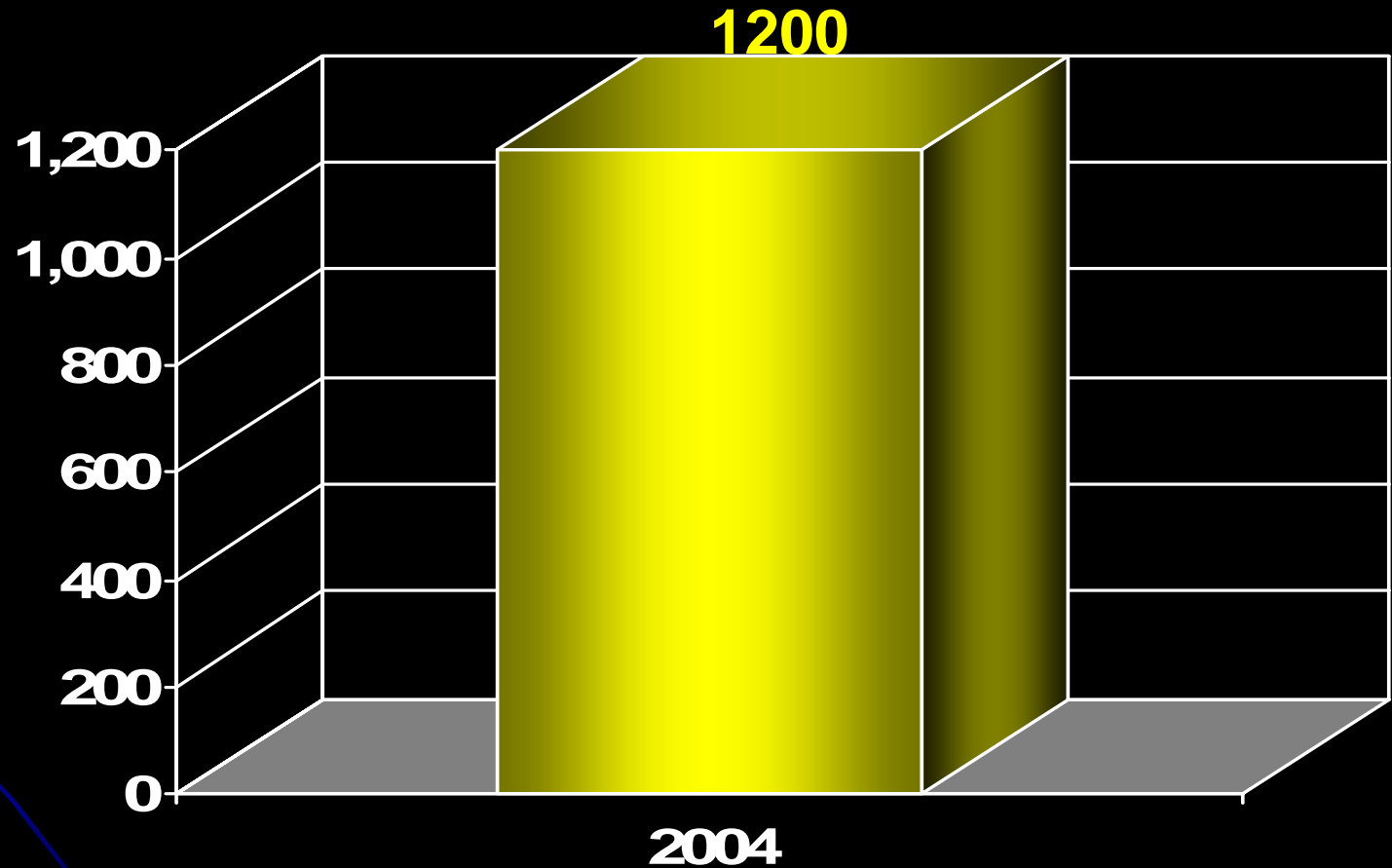
Population in mid 2004 : 159.2 million

	2004	2005
Number of cases	8127	5923
Stents/Patient		$12,631/5923 = 2.1$
% DES		$5010/12,631 = 39.7\%$
No. Interventional Cardiologists	~ 40 - 45	~ 50 - 60
No. Cardiac Centres	16	26
No. Cath Labs		47

PHILIPPINES

Started 1989
Population: 84,174,092

Growth of PCI



■ No. of PCI

PHILIPPINES

Population in mid 2004 : 84,174,092

Number of Cases a year (2004) : 1200

Number of centres: 13

Number of Interventionalists: 62

Stents:

BMS 190

DES 1800

DES penetration **90%**

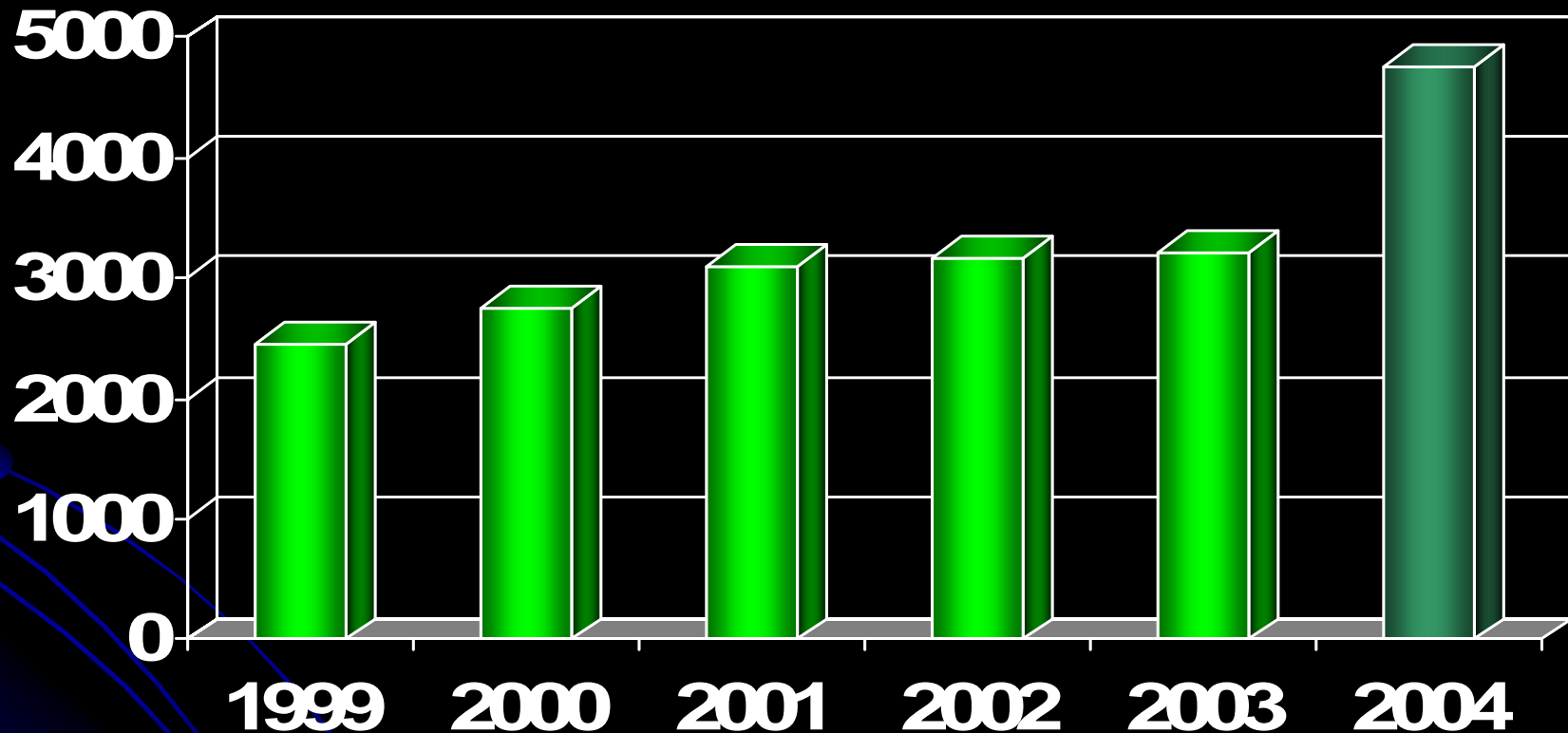
SINGAPORE

Started 1984

Population: 3,547,809

Growth of PCI

~ 4500 - 5000



■ 1999 ■ 2000 ■ 2001 ■ 2002 ■ 2003 ■ 2004

SINGAPORE

Population in mid 2004 : 3,547,092

Number of Cases a year: 4500 - 5000

Stents used : BMS 190

DES 1836 (~ 1.7 DES/ procedure)

DES penetration: **99%** private practice

30% public sector

Number of centres: 5

Number of Interventionalists: ~ 24

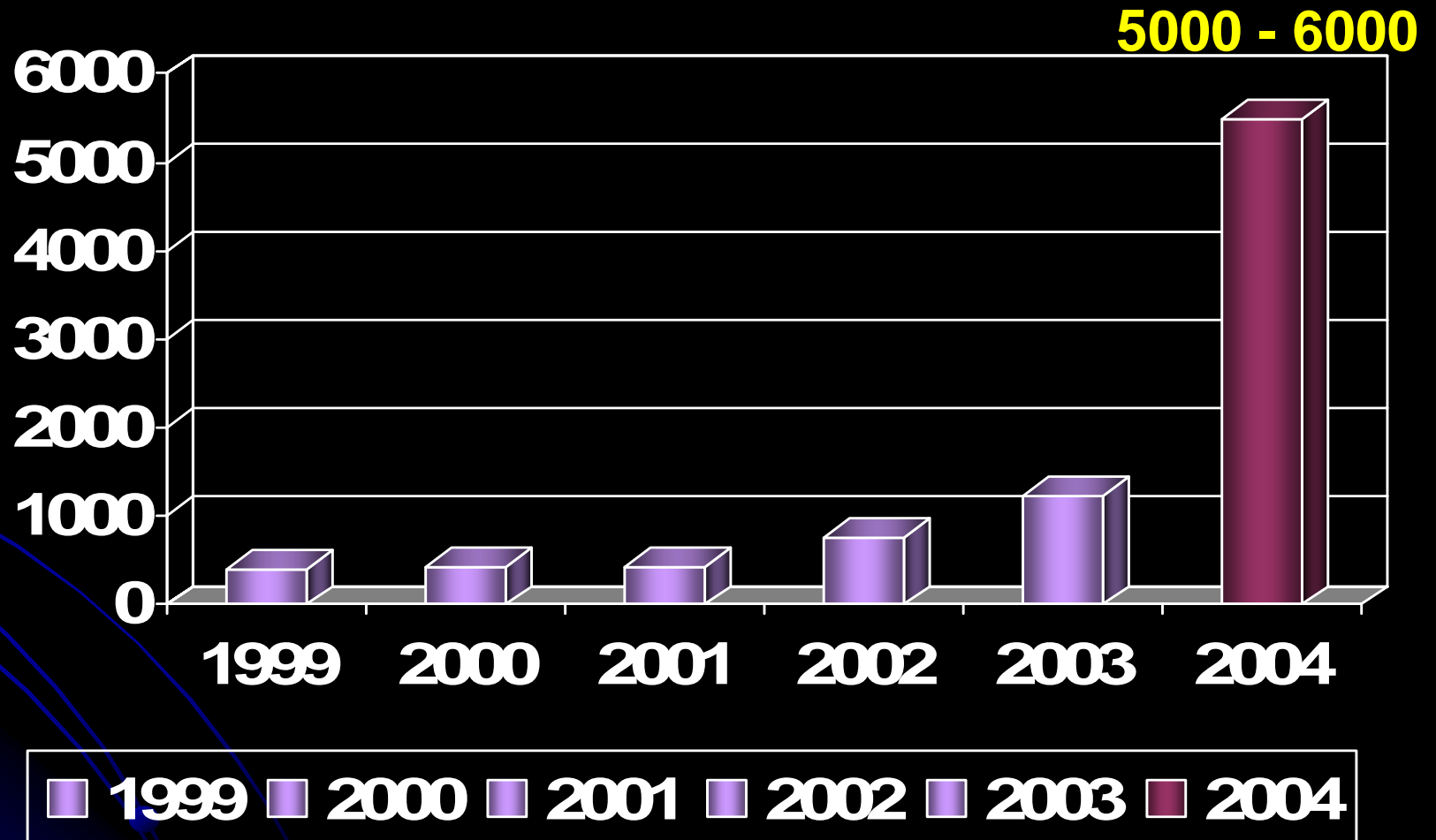
Who performs peripheral intervention : Mostly Cardiologists

THAILAND

Started 1989

Population: 63.8 million

Growth of PCI



THAILAND

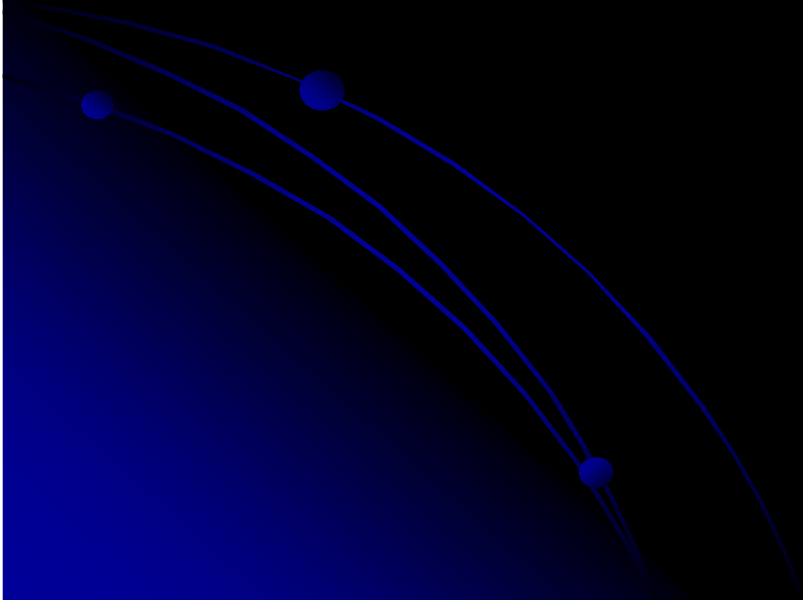
Population in mid 2004 : 63.8 millions

Coronary Intervention Club

Number of centres: 24 (2003) – 35 (2004)

Number of Interventionalists: 48 (2003) – 50 (2004)

Who performs peripheral intervention: Cardiologists
[rarely] Radiologists



THAILAND

Drug-Eluting Stents

Cypher (Sirolimus-Eluting Stent)

August 2002

Taxus (Paclitaxel-Eluting Stent)

April 2003

% DES

30% (2004)

Specific group where DES preferred:

Diabetics

Small vessels

Long lesions

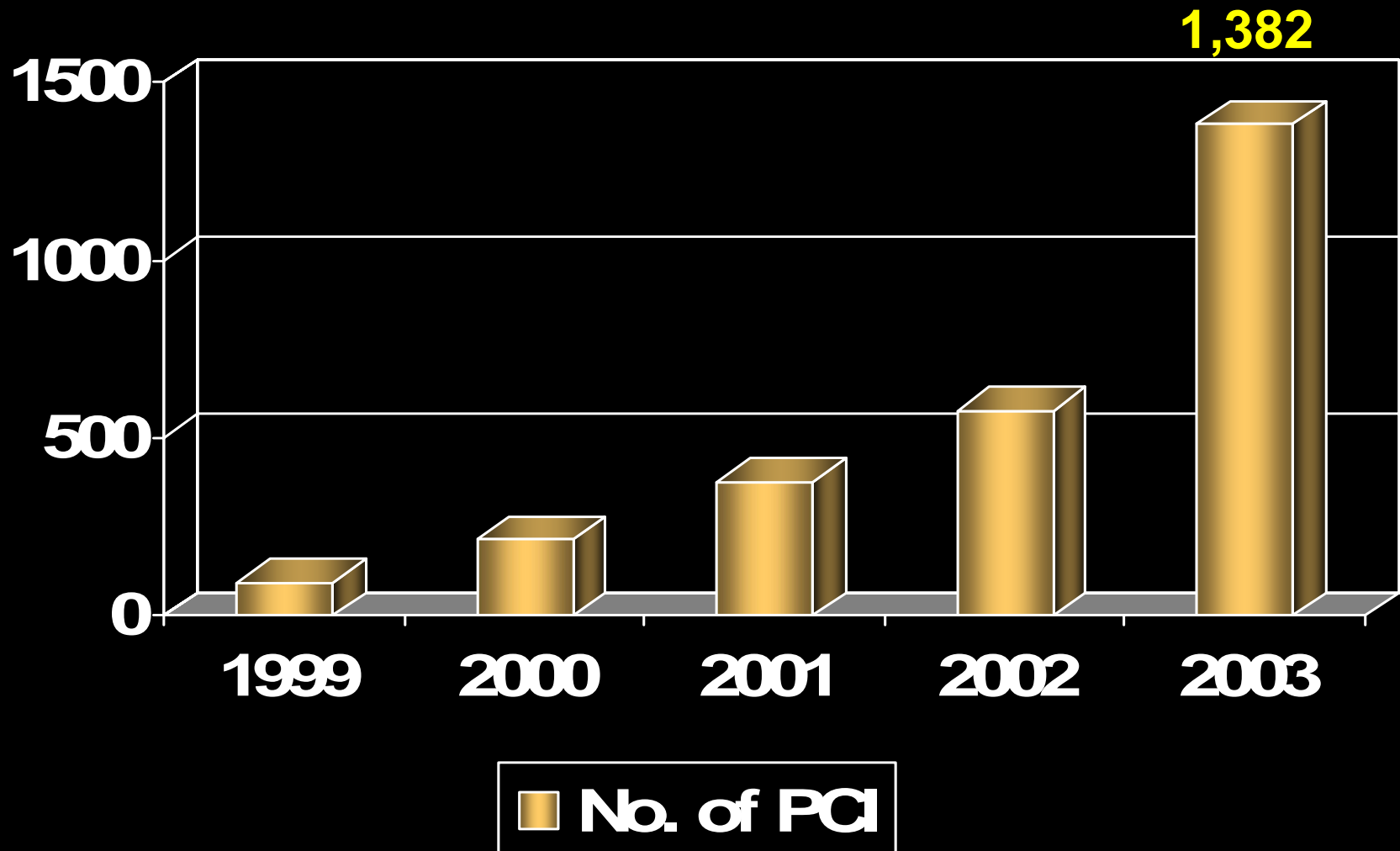
Left main

Ostial

VIETNAM

Population: 82,851,971

Growth of PCI



VIETNAM

Number of centres: 8

Number of interventionalists: 15

Who performs peripheral intervention:

Carotid: Interventional Cardiologist
Vascular Surgeon

Renal: Interventional Cardiologist
Interventional Radiologist
Vascular Surgeon

Aorto-Iliac: Interventional Cardiologist
Interventional Radiologist
Vascular Surgeon

Aortic Aneurysm: Vascular surgeon

VIETNAM

Drug-Eluting Stents

Cypher (Sirolimus-Eluting Stent)

July 2002

% DES **35%** (2004)

Specific group where DES preferred:

Diabetics

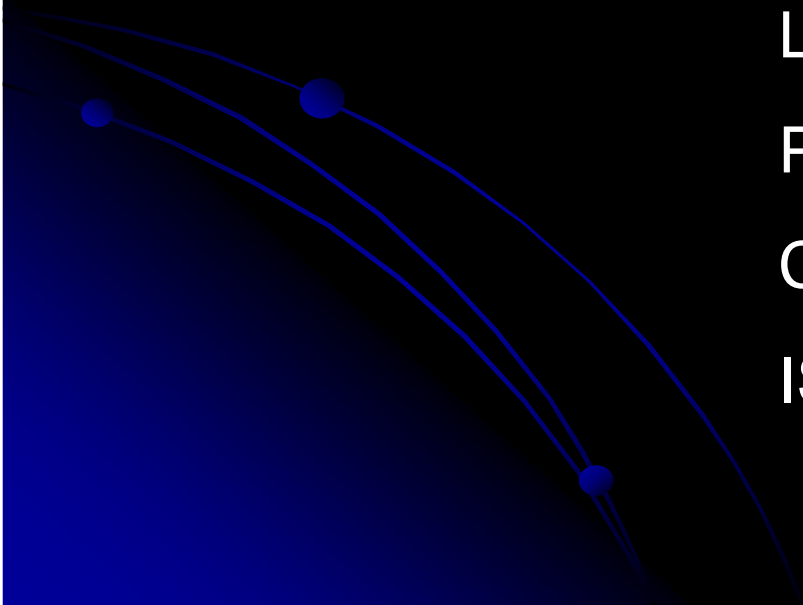
Small vessels

Long lesions

Prox LAD

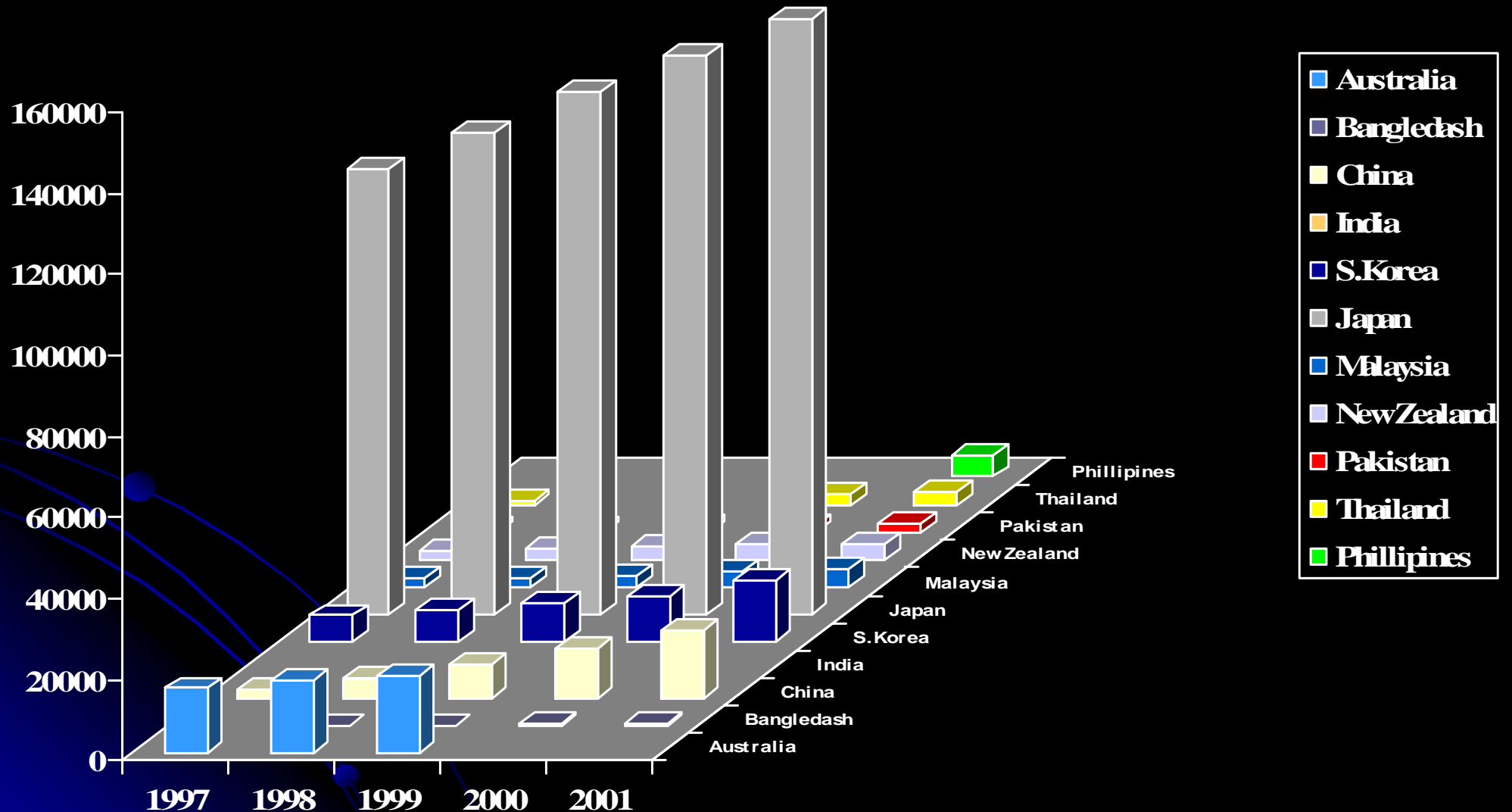
CTO

ISR

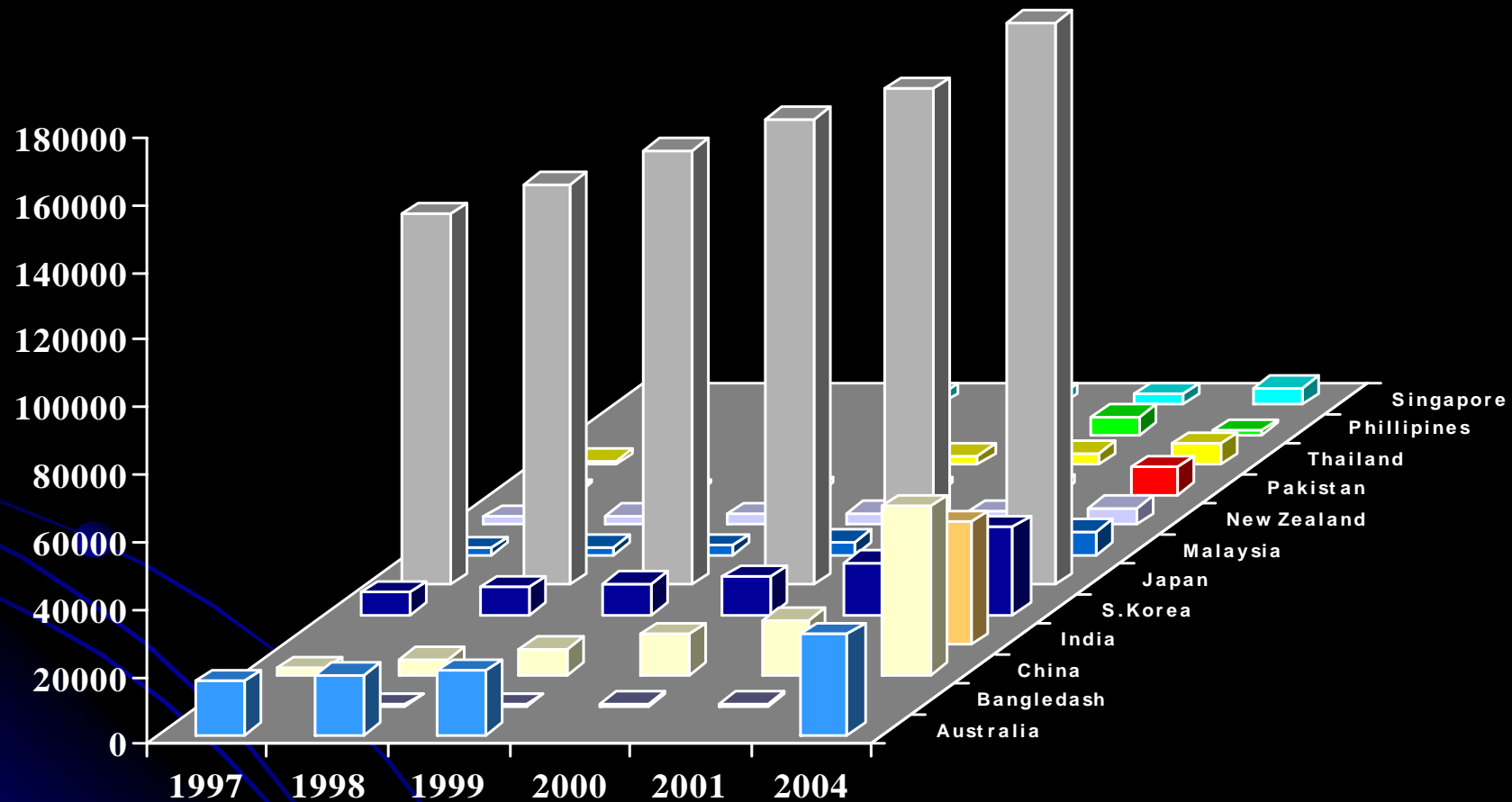


PTCA TREND IN ASIA PACIFIC

Presented @ World Congress in 2002: Prof Y L Lim



PTCA TREND IN ASIA PACIFIC



Australia	Bangladesh	China	India	S.Korea	Japan	Malaysia
New Zealand	Pakistan	Thailand	Phillipines	Singapore		

PCI in Asia Pacific Region

PCI is growing

Use of DES: rapid growth esp in private practice

Need of Registry

