

PHILIPS

Improving Healthcare through Technology

Paul Smit

Philips Medical Systems – Analyst Day
June 9, 2004

Agenda

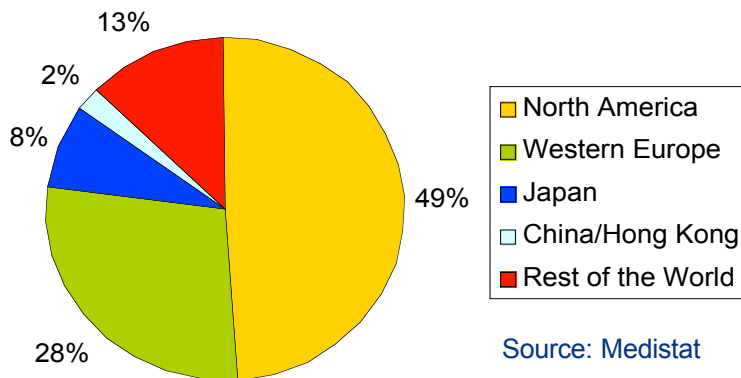
- The burden of Disease
- Impact of Medical Technology
- The Care Cycle
- Personal Healthcare
- Molecular Medicine



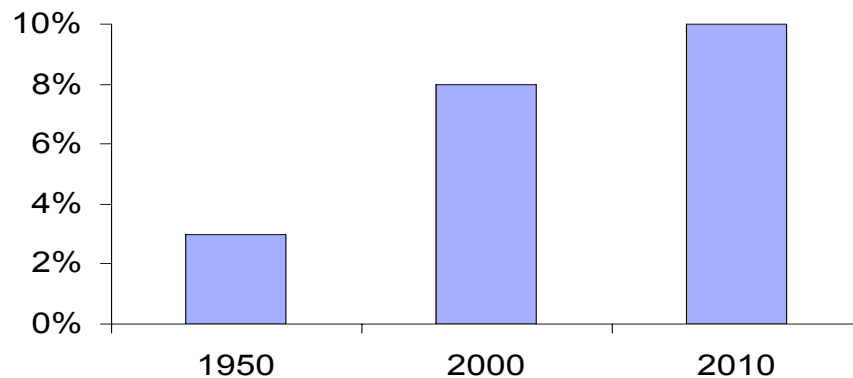
Healthcare is the world's largest service sector

**Worldwide Healthcare Expenditure:
US\$3,300 bln in 2002**

North America makes up 49% of the worldwide spent



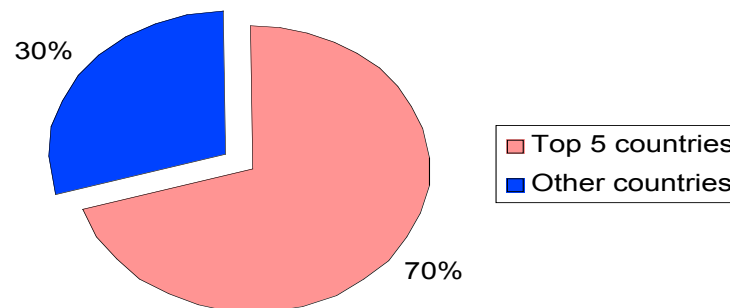
Healthcare Expenditures will grow from ~8% of worldwide GDP to ~10% in 2010



Source: WHO

Healthcare spending today is concentrated in a few markets

**USA, Japan, Germany, France and Italy:
70% of the World's Healthcare spendings**



	Healthcare spendings			
2002	\$ bln	\$ Per capita	% of GDP	1990 - 2003 CAGR
USA	1,533	5,375	14.7%	5%
Japan	248	1,960	6.2%	6%
Germany	238	2,899	10.7%	5%
France	140	2,284	9.7%	5%
Italy	120	2,096	8.2%	5%

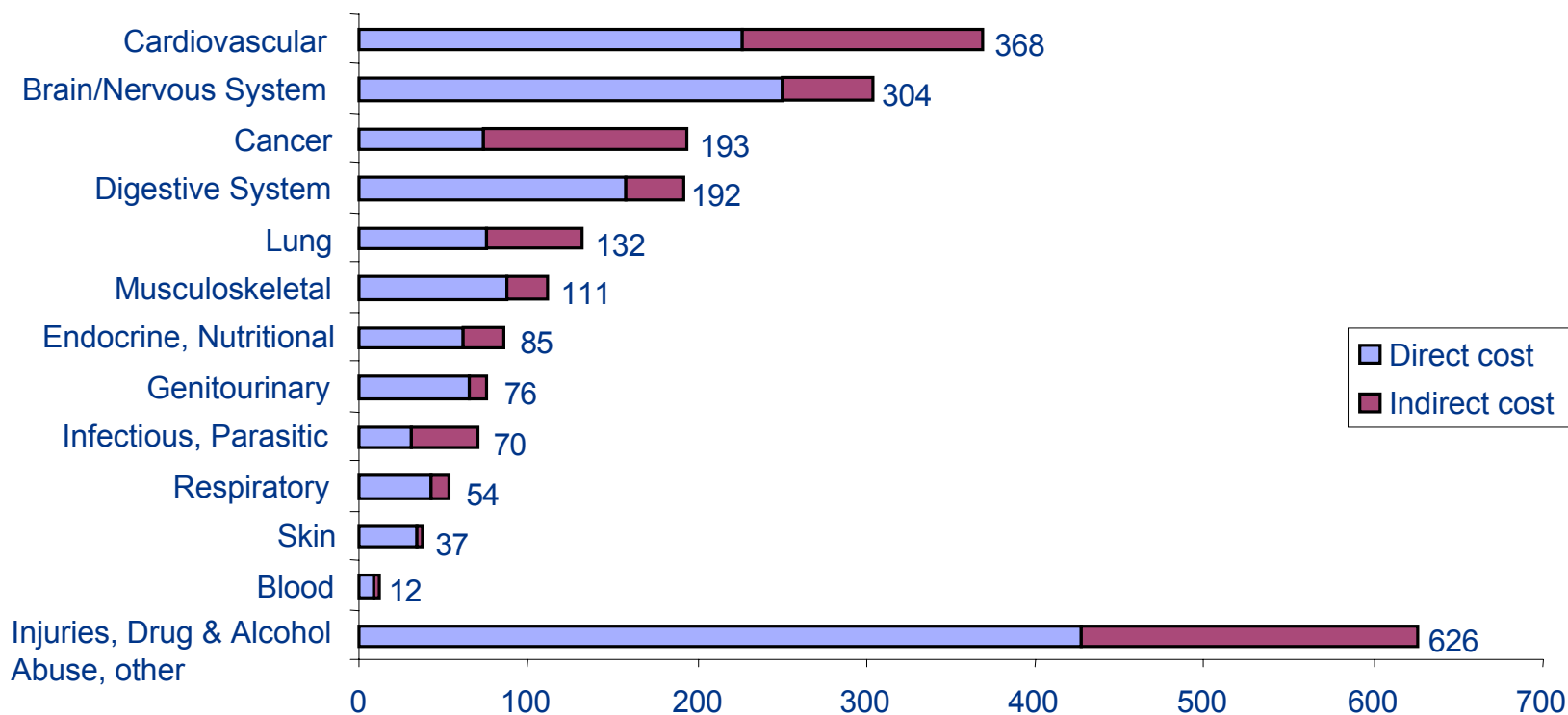
Source: Medistat

As a nation's GDP increases, Healthcare spendings will rise

Heart & Brain disease and Cancer are the most expensive diseases....

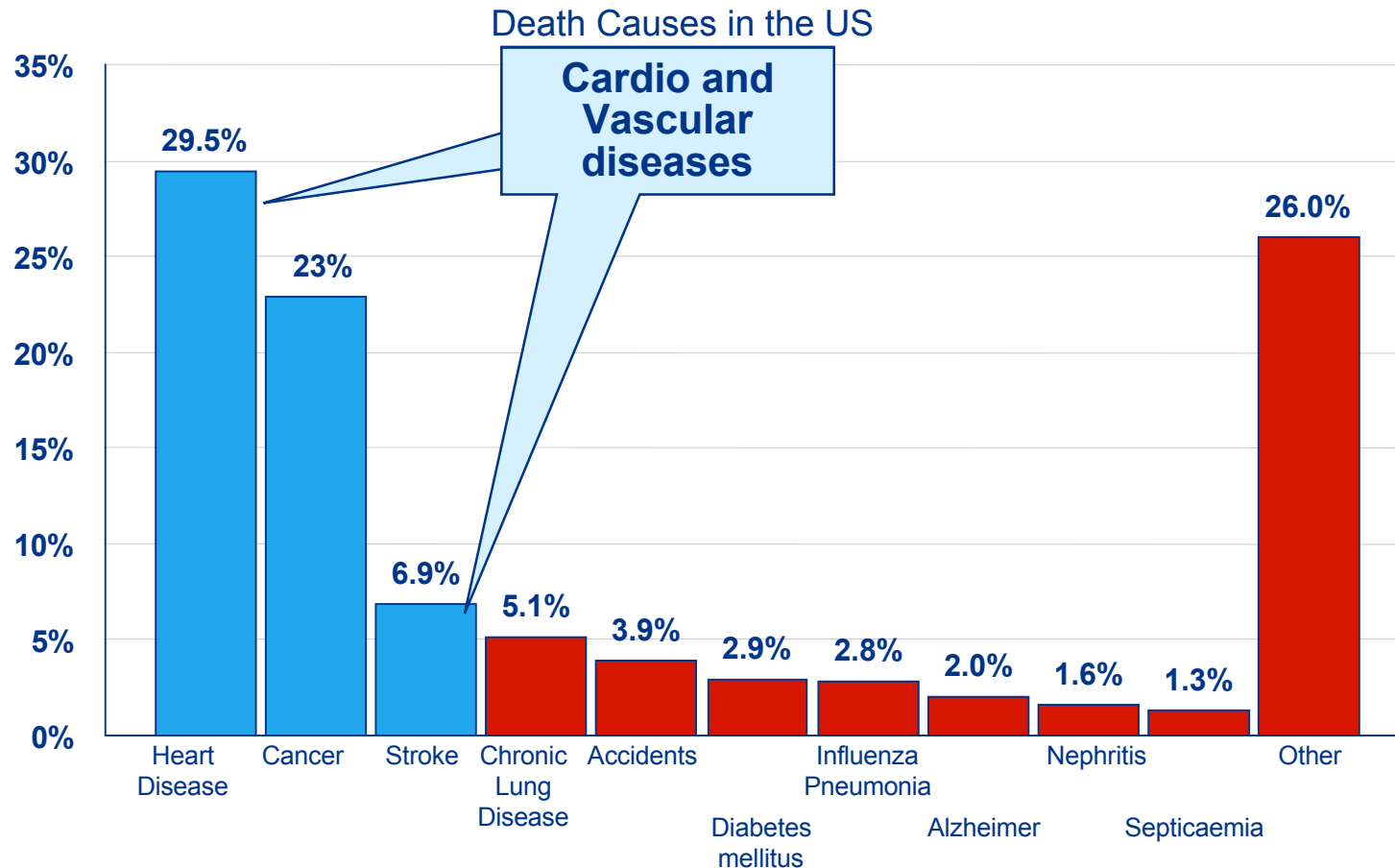
Break Down of Healthcare Costs by Disease Area (USA)

Indirect Costs include Morbidity costs (cost of lost productivity due to illness) and Mortality costs (cost of lost productivity due to premature death)



Source: NIH, 2004

...and the most deadly



Cardio and Vascular Diseases and Oncology responsible for ~60% of US Deaths

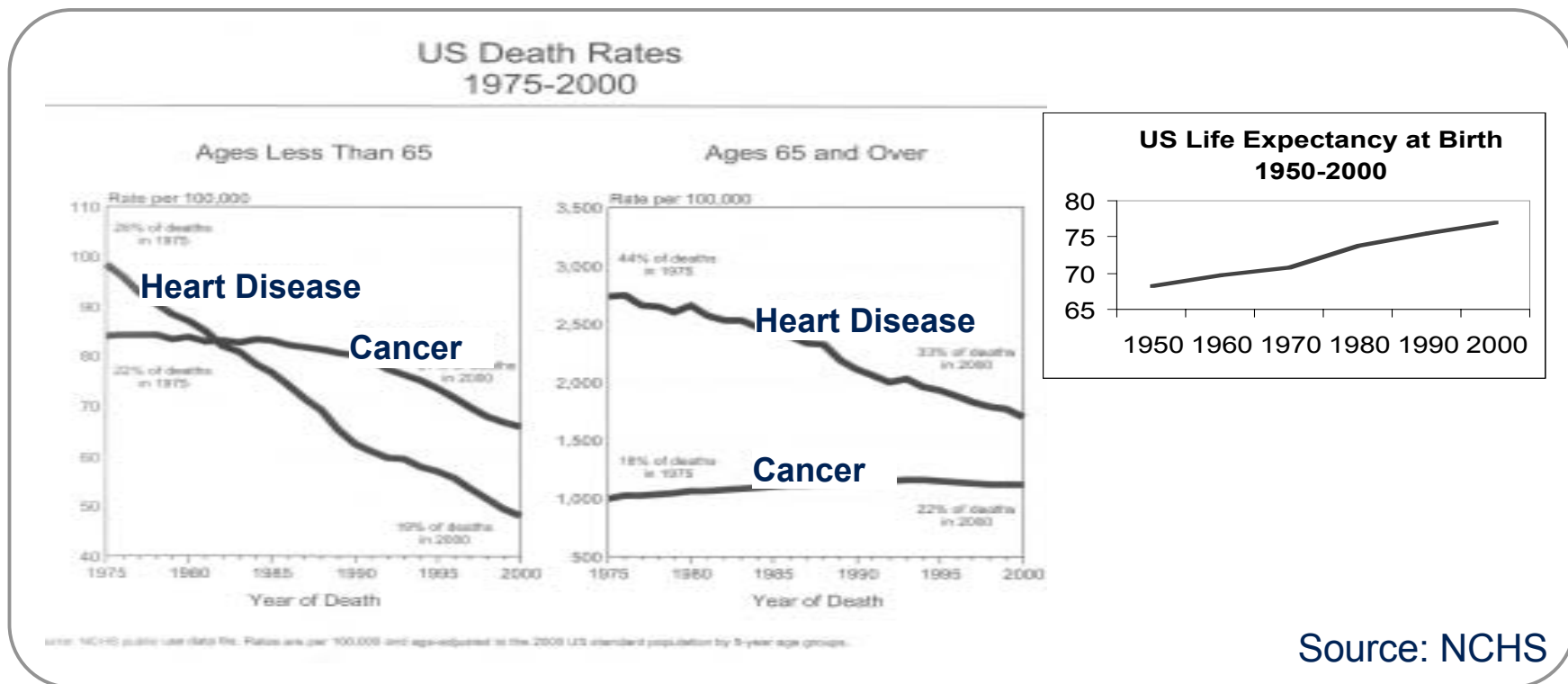
Source: CDC, National Vital Statistics, 2001

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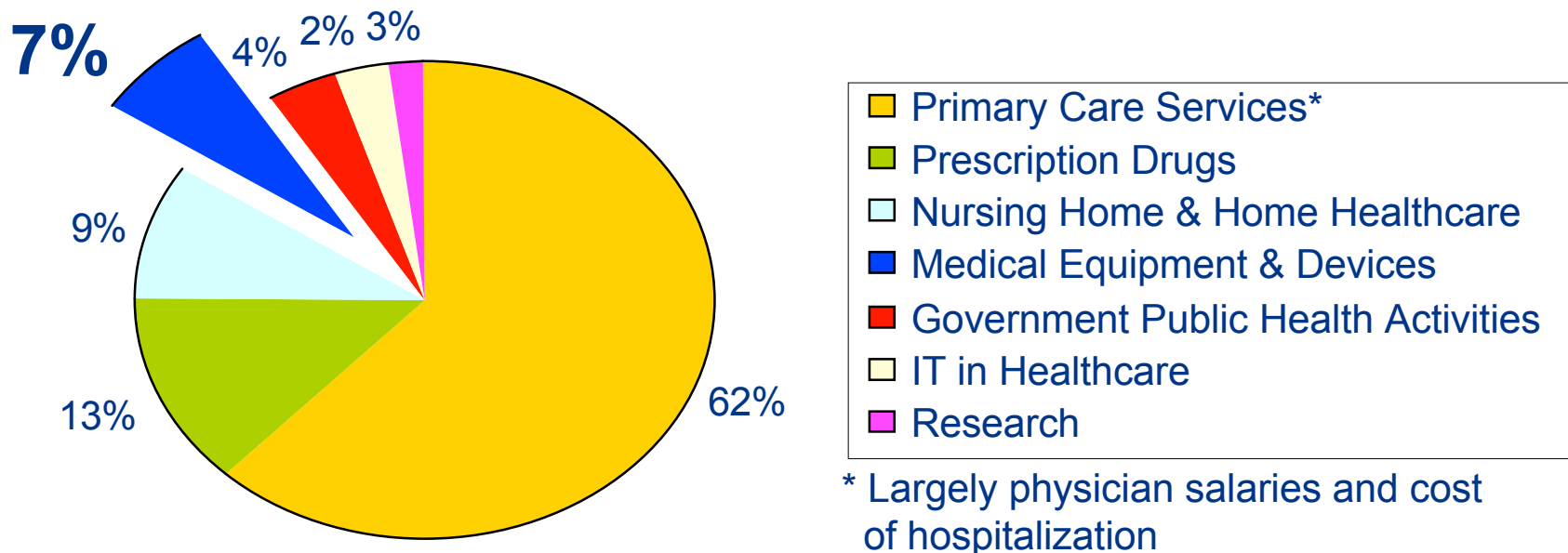
Medical Technology has greatly improved Healthcare



“Around 70% of the survival improvement in heart attack mortality is a result of changes in technology.” Cutler & McClellan, 2001

....while accounting for just 7% of Healthcare costs

Break Down of Healthcare Costs by Spending Category (USA)

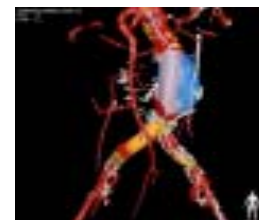


- In heart disease, every \$ in technology brings \$ 6 in economic value
- Cutler & McClellan, 2001

... with big potential to transform Healthcare

Imaging

earlier diagnosis saves lives and reduces costs



Minimally invasive surgery

reducing patient trauma and costs



Healthcare IT

Right Information at the right time
enables better treatment and lower costs



Molecular Medicine

Preventing disease from happening



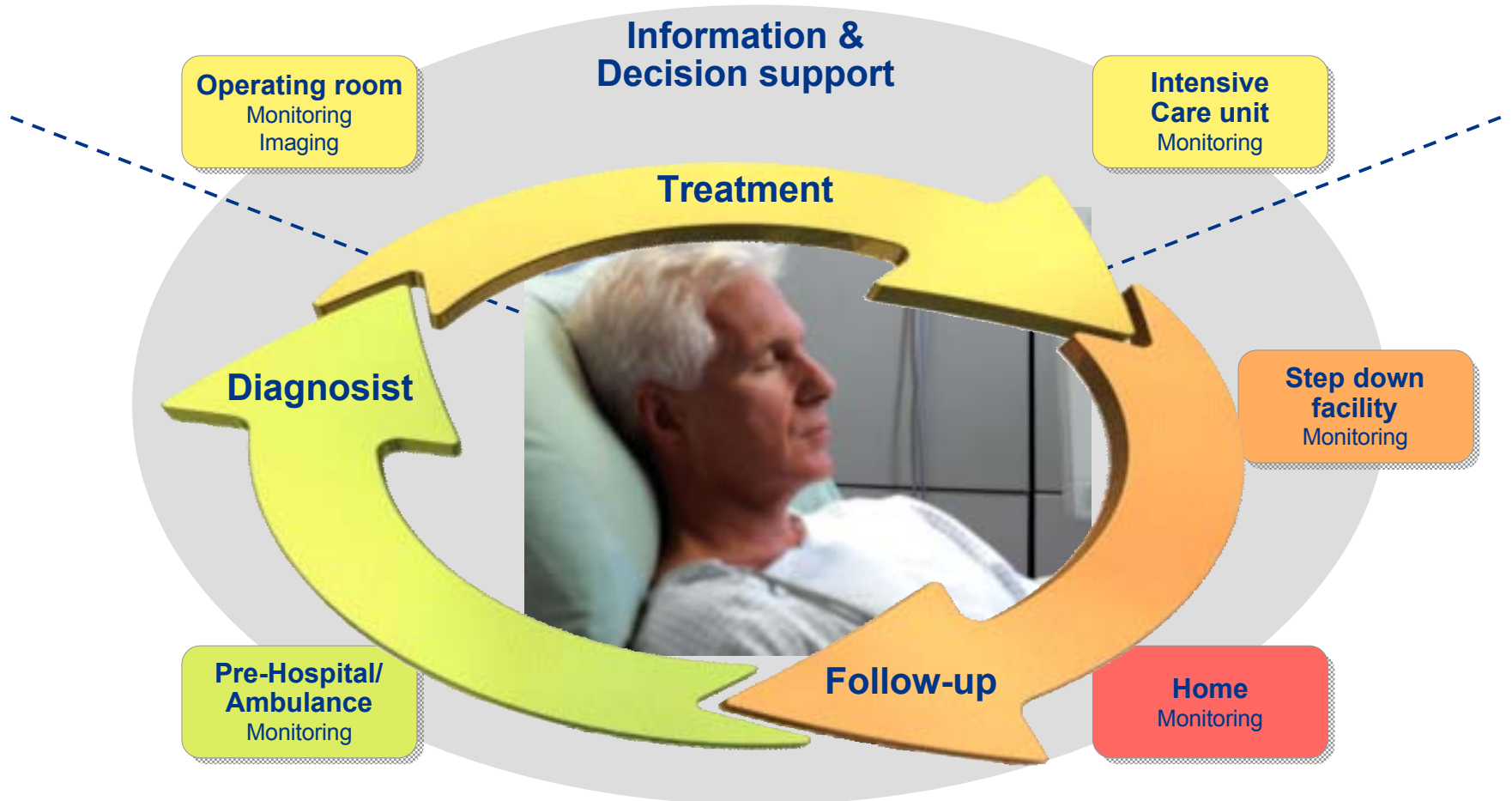
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The Care Cycle

Patient Monitoring



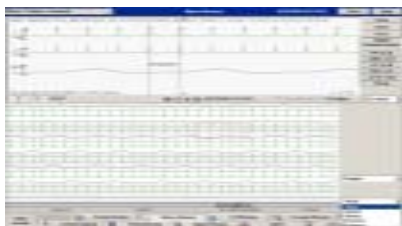
Patient Monitoring: Monitoring vital life-signs of Patients in real time

Informed patient management

E.g. Neonatal Event Review automatically detects neonatal intensive care events and captures real-time wave snippets



IntelliVue Patient Monitor



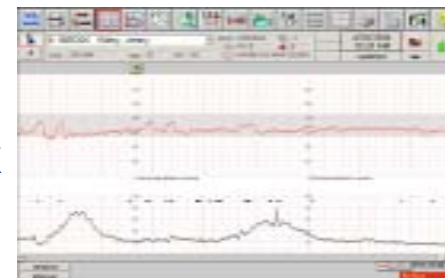
Clinical review applications and analysis tools

Detailed retrospective analysis of patient condition, including full disclosure of 96 hours of data

IntelliVue Information Center

Chart interpretation

Uses rules-based algorithm to interpret complex fetal heart rate and alert clinicians to changes in fetal condition



OB TraceVue CIS

Major contribution to drive Hospital cost down through shorter Length-of-Stay

- Portal technology:
Information at the Point of Care
- Open systems integration
- Training and workflow efficiencies

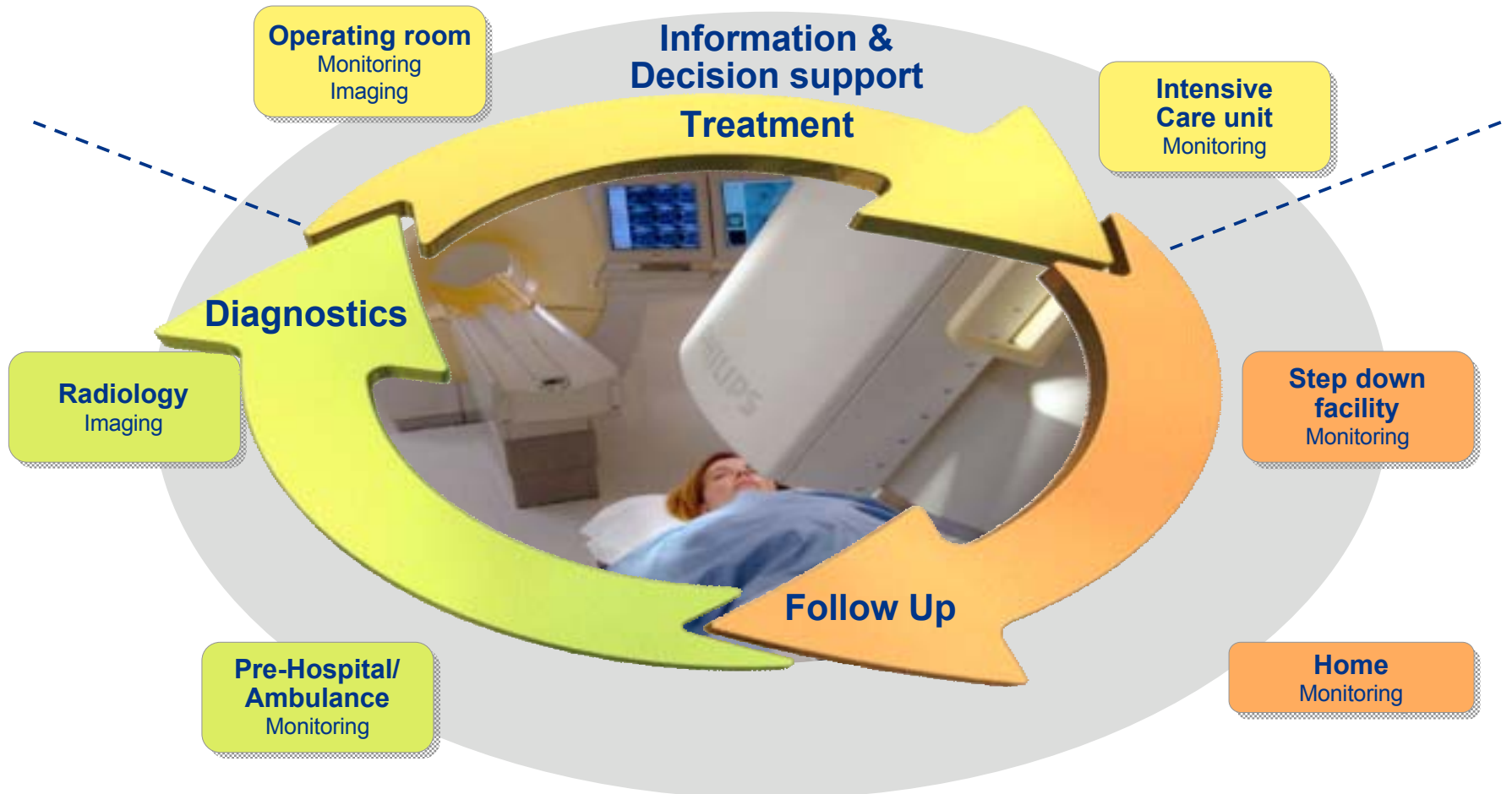
Philips:

- Top ratings in service and support
- History of innovation



The Care Cycle

Diagnostic Imaging



“Imaging is key to lower Healthcare costs and improved patient outcome”

McKinsey, 2004

Imaging is about:

- Better diagnosis for better treatment
- Earlier detection to catch disease early
- Minimally invasive surgery to avoid trauma and shorten procedure time

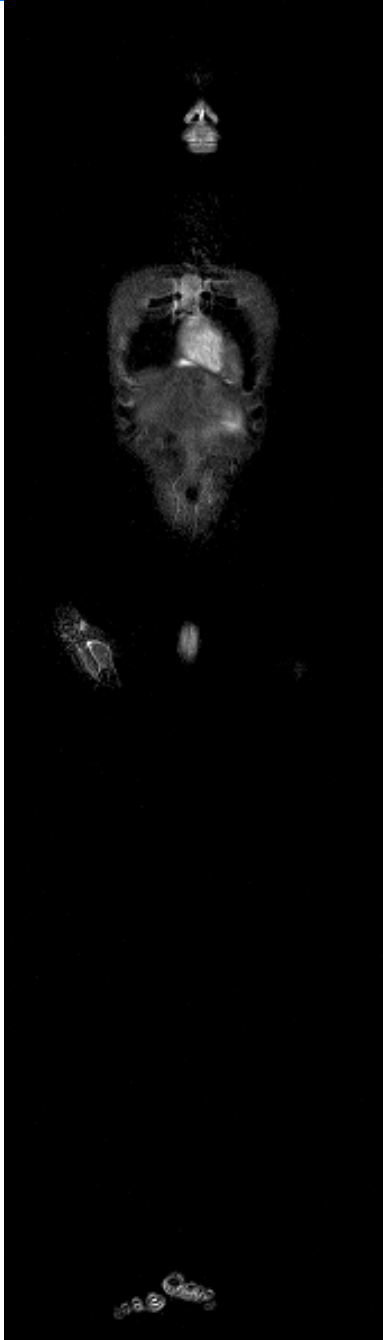
Continued advances in Imaging modalities will transform medicine during this decade””

SG-2, 2004



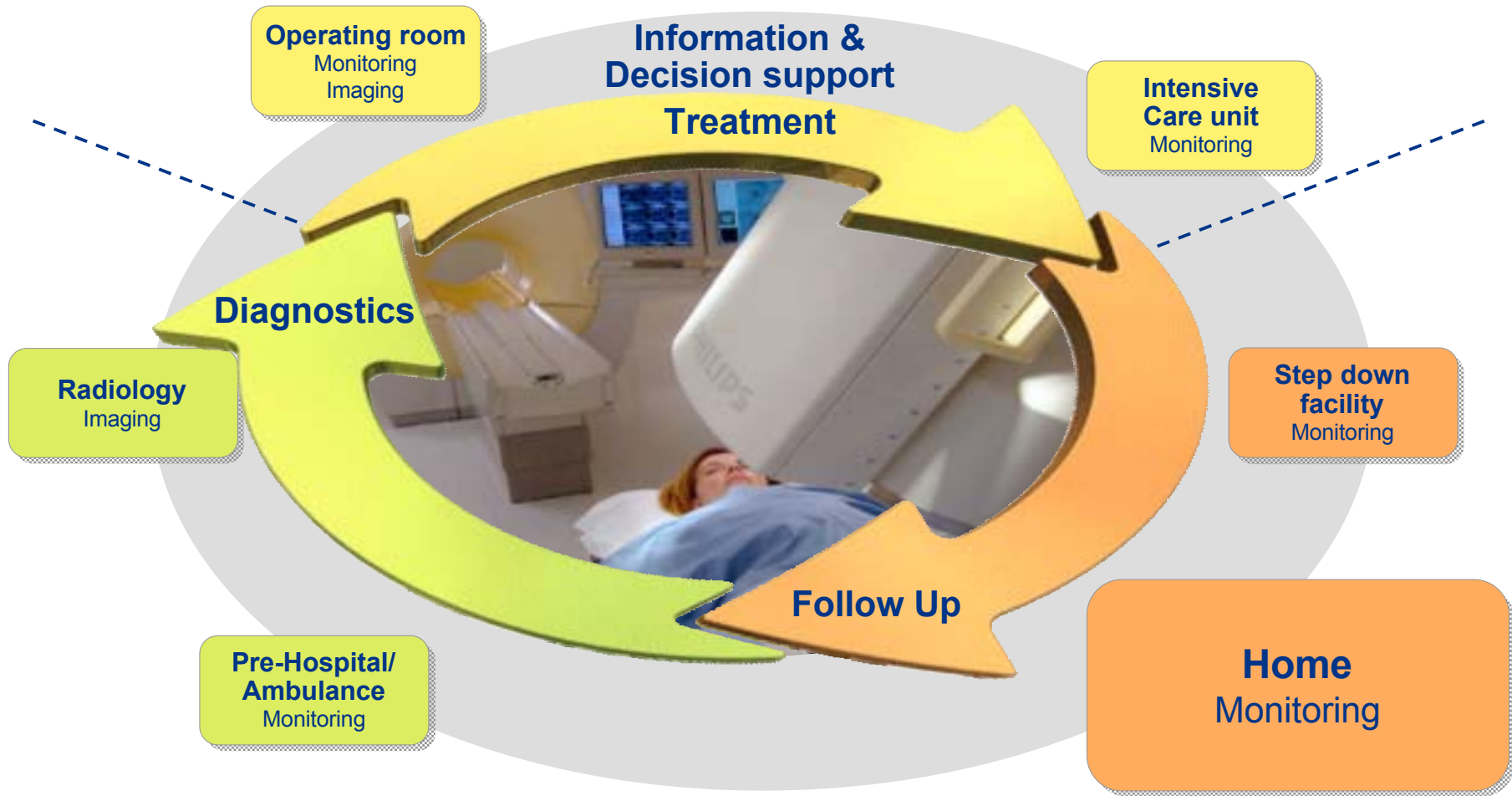
MRI: Breakthrough in Whole Body Imaging

- Trauma scanning
- Cancer diagnosis:
Screening for Metastases
 - Scan Time < 5 min



The Care Cycle

Interventional Imaging



Imaging innovations allow for Minimally Invasive Surgery

- Minimally invasive surgery...
- avoids trauma
- saves costs



Digital 2D Imaging



Very detailed 2 D....and 3D guidancel

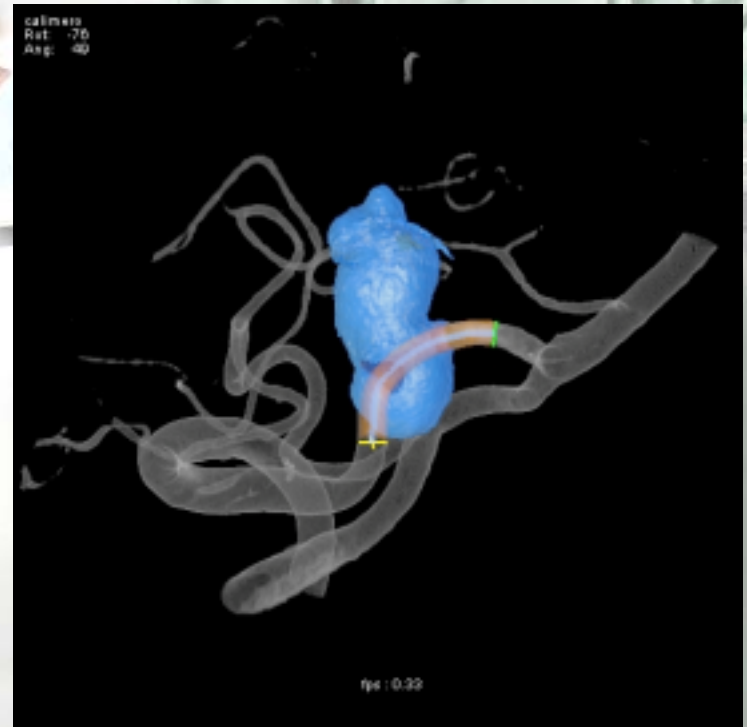
....Continuous innovation to treat Aneurysms

System which will

- analyse
- Compute
- and simulate

an aneurysm.....

... And the treatment path



Main areas for minimal invasive treatments

Cardiovascular

- Angiography
- Stent placement
- Electrophysiology ablation
- Pacemaker implant

Oncology

- Image guided neurosurgery
- Radiation Therapy
- Brachytherapy (in-body radiation therapy)
- Cryosurgery

Orthopedics

- Image guided surgery (i.e., spinal)

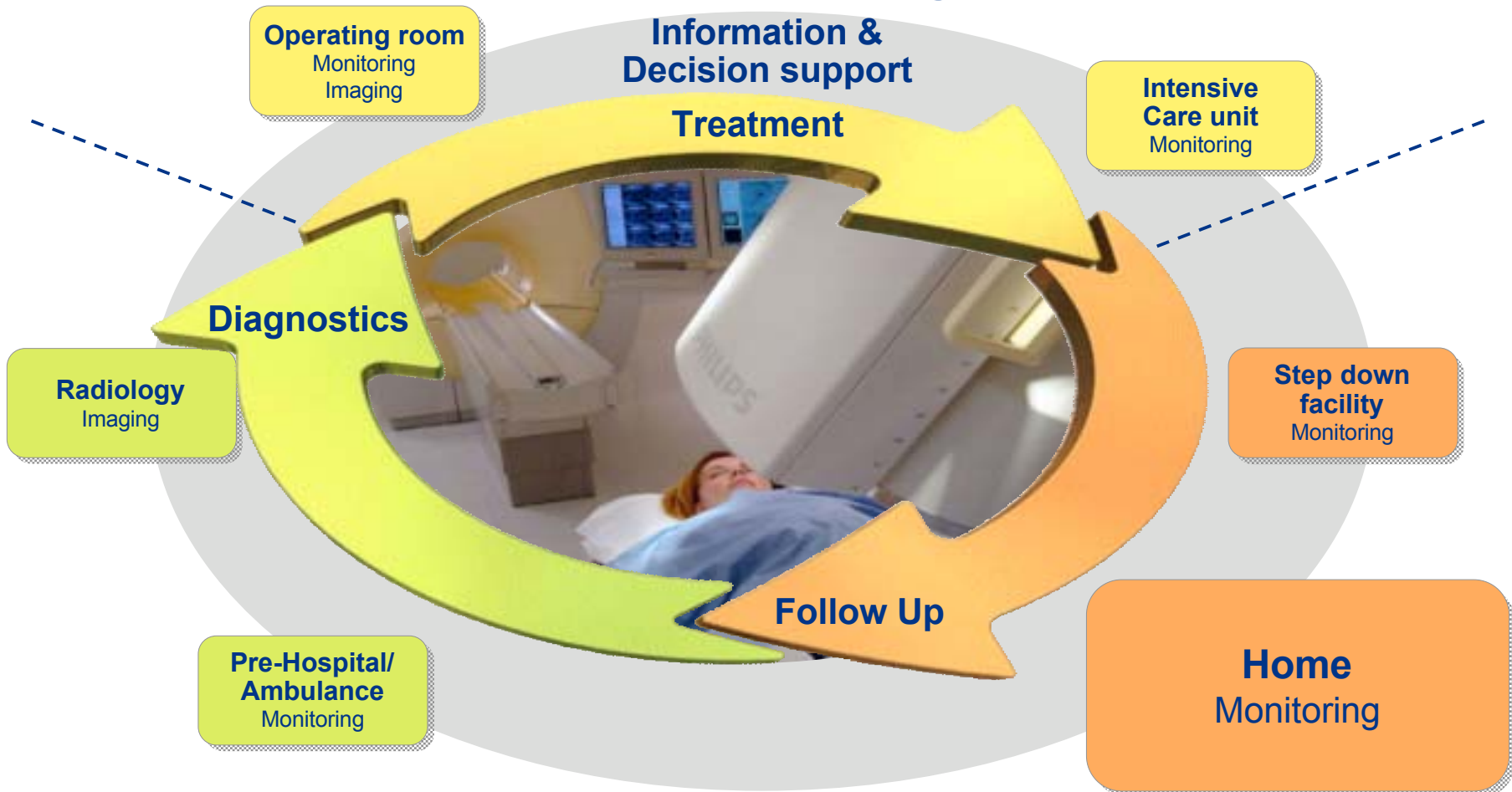
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The Care Cycle

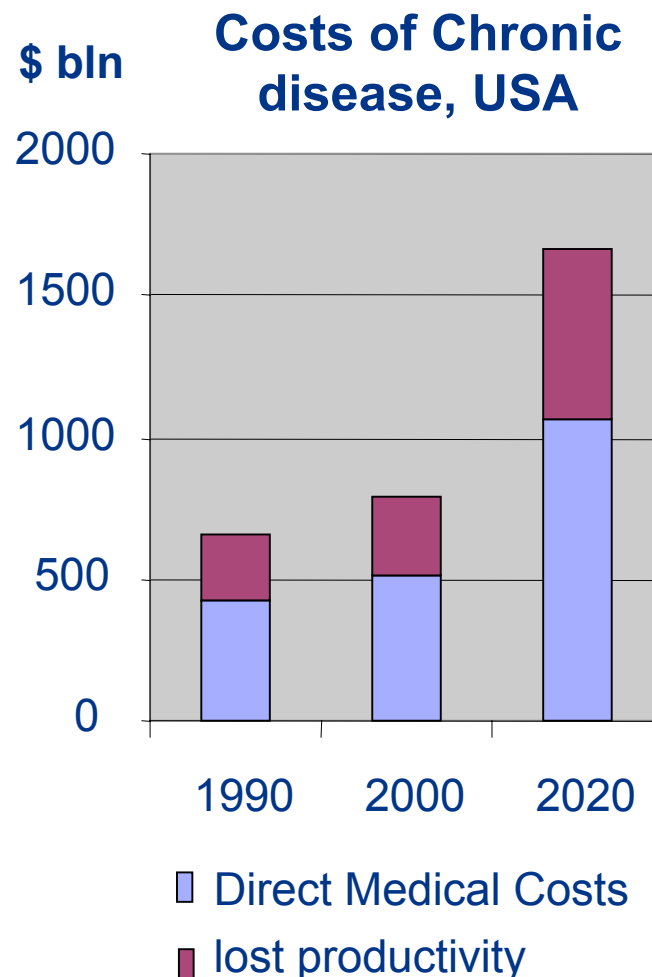
Home Monitoring



Home Monitoring and Personal Healthcare

- Burden of Chronic disease is increasing
- Main cause of death for 50% of people worldwide
- In the USA, 50% of all people will have a chronic condition in 2020, consuming 80% of the healthcare spending*
- How can we apply technology to manage chronic disease better?

*(RAND corporation)



Philips Personal Healthcare Solutions

Monitoring and Early Detection

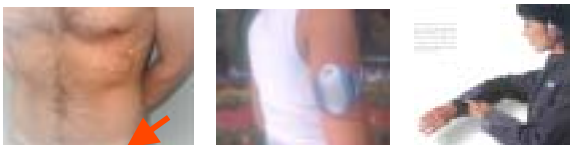
Devices



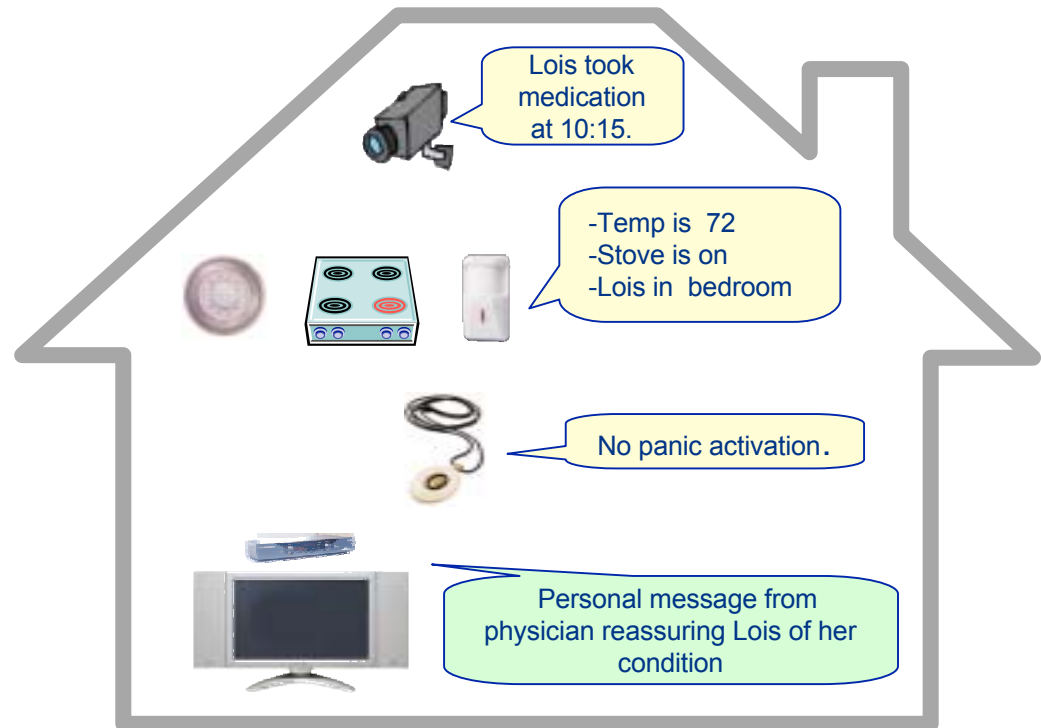
Biochemical



Wearable Sensors

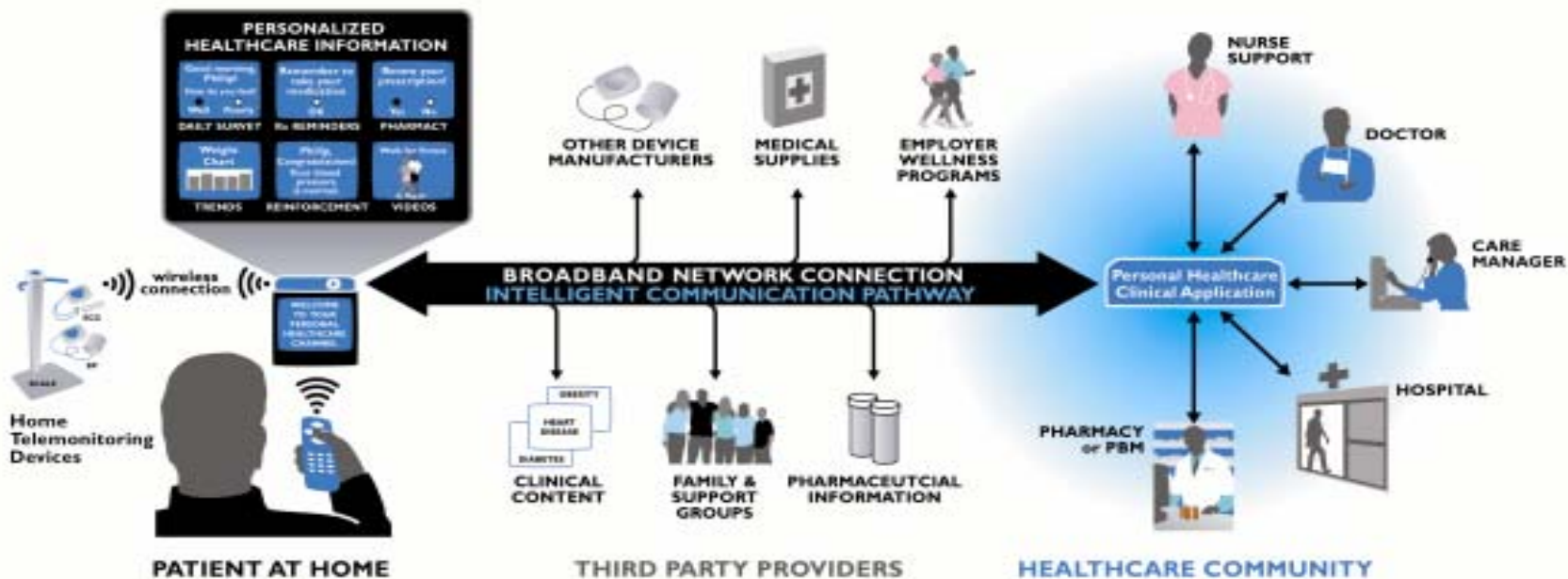


Communication Platform



Unique Personal Healthcare Platform

....secure and personalized
 ...remotely connects patients to their care community
 ...Enables the development of new care models



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The Care Cycle in Molecular Medicine

High growth for test, monitoring and imaging equipment for 2007- 2020+

Information & Decision support

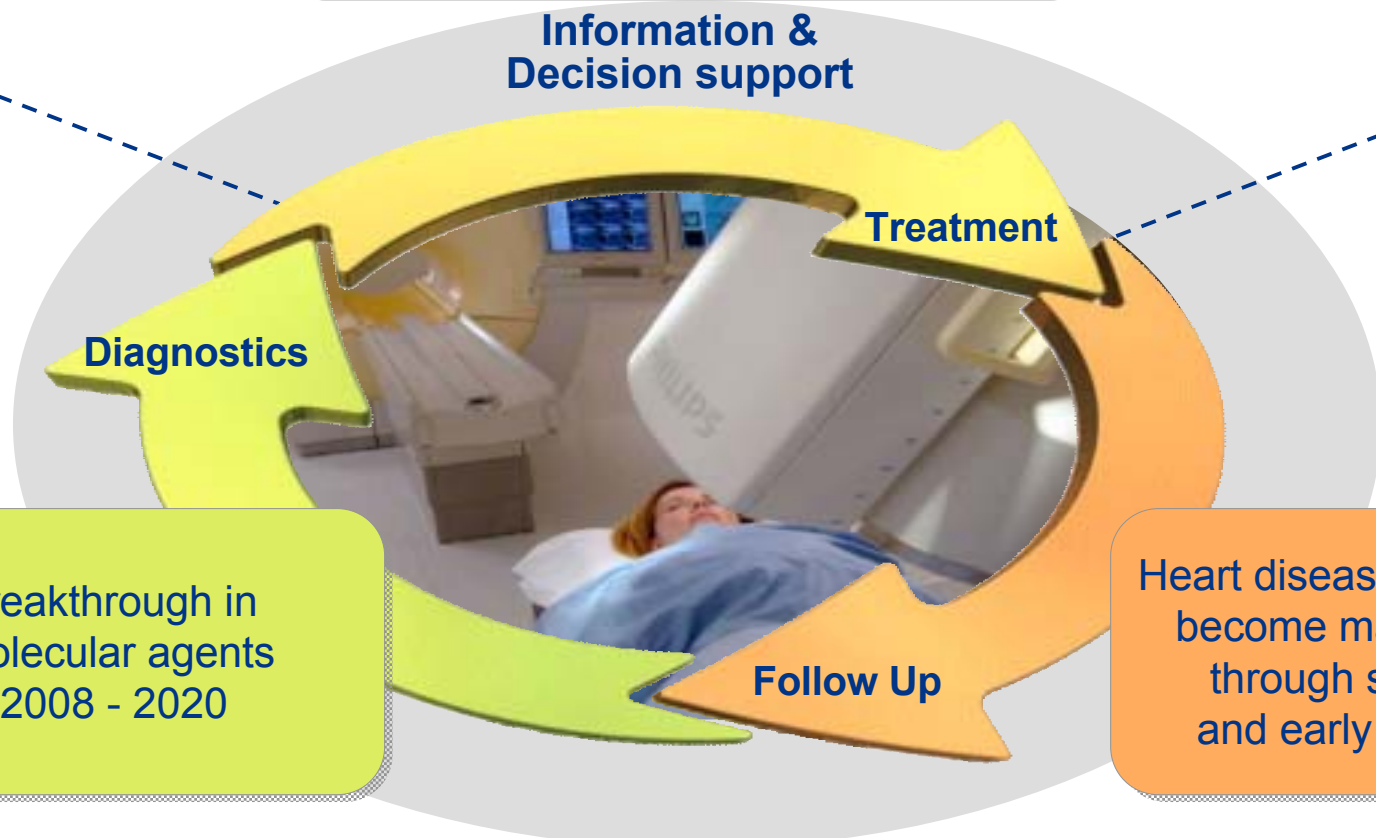
Treatment

Diagnostics

Follow Up

Breakthrough in molecular agents
2008 - 2020

Heart disease and cancer become manageable through screening and early treatment

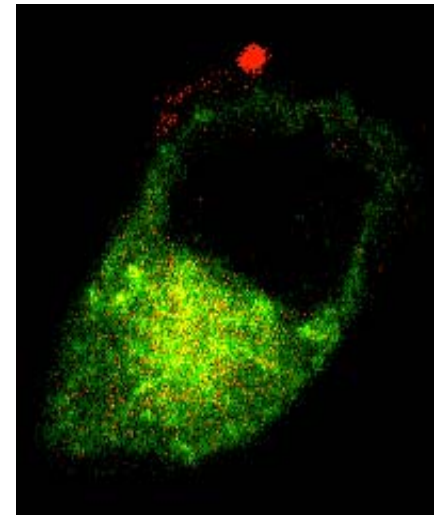
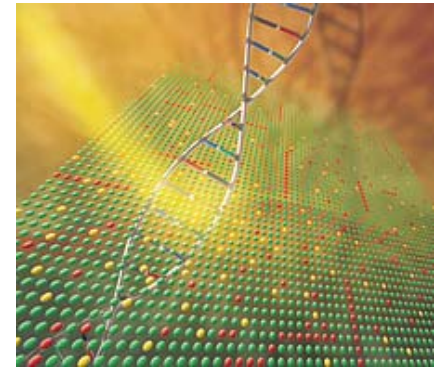


Molecular Medicine

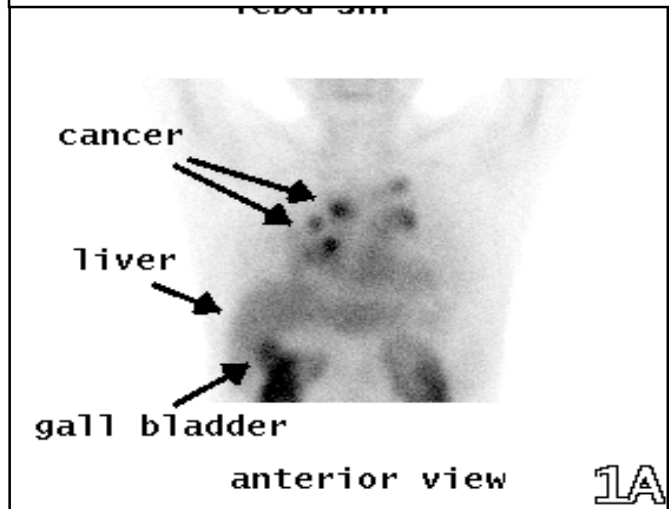
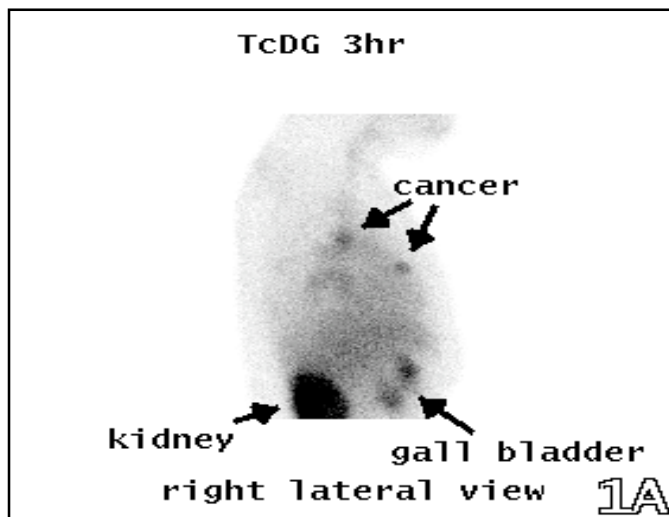
The Future

Your own biochemistry becomes
the *basis for treatment*

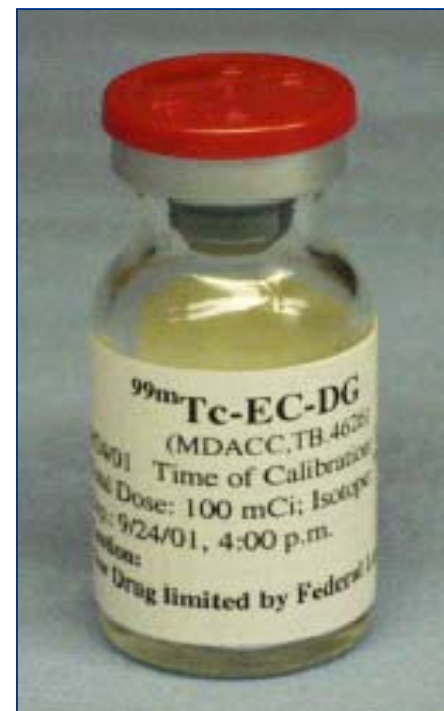
Imaging will screen people who have
known genetical or life-style risks
whether a disease is developing



CEL>POINT: Detecting Cancer....



Thyroid Cancer



Images courtesy: Cell>point, Houston TX

...Theseus: Selecting the best Cancer Treatment

Pre Chemotherapy



Apomate

Post Chemotherapy



**Apomate
48h post
chemoRx**

Courtesy Prof. Pierre Rigo, Univ. Liege

Next stop: Detecting vulnerable Plaque ...



Conclusions

- Increased adoption of Medical Technology will reduce cost and increase quality of care
- Continued advances in Imaging will transform medicine during this decade
- Philips is well positioned to deliver the benefits

