

Integrated Cancer Centre for South East London



Oncology Research Assessment: European Point of View

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Presentation

- Research assessment: philosophy to strategy
- Research assessment through 'inputs'
- Research assessment through 'ongoing' metrics
- Research assessment through 'outputs'
- Research assessment as a complex adaptive system: how can we link this with patient outcomes?

Dynamic & tacit nature of research

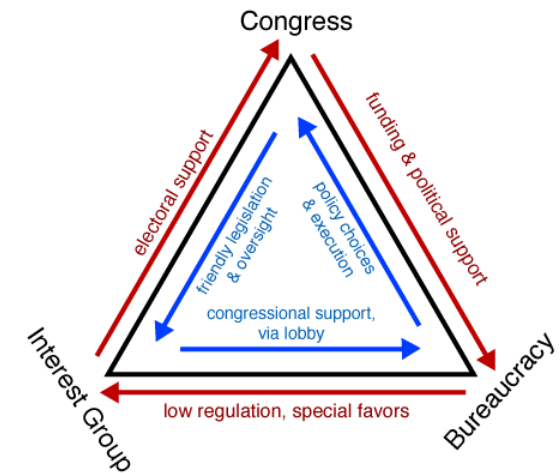


Michael Polanyi 1958. *Personal Knowledge: Towards a Post-Critical Philosophy*.

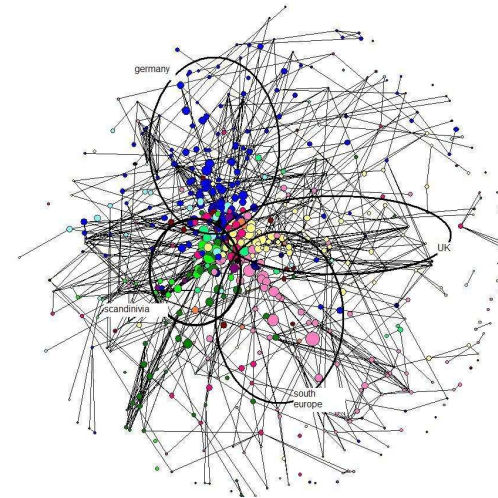
Research assessment is complex & political



Pulitzer Prize "Iron Triangle"



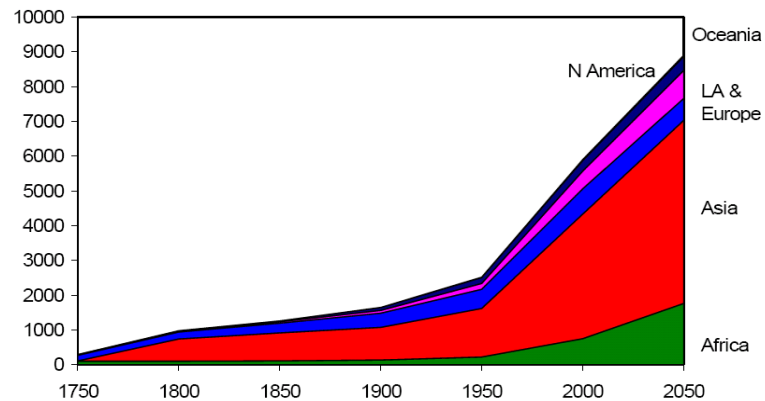
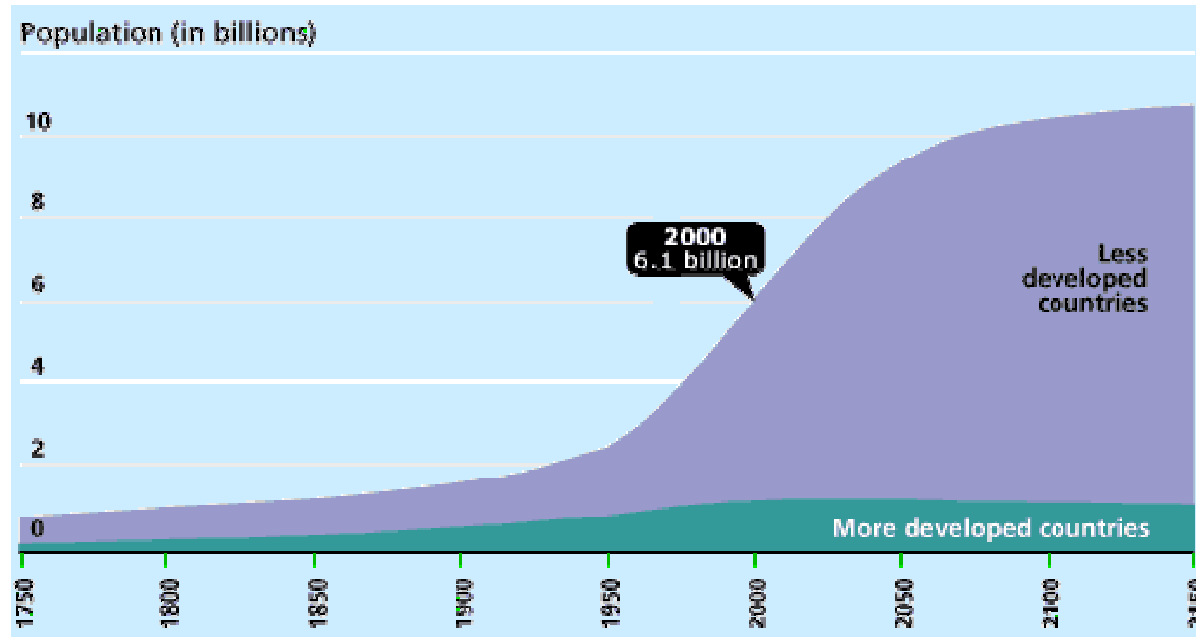
Heclo's Issue Networks



Sam Overman & Don Simonton. Iron triangles & issue network.

Public Admin Rev 1986, 46: 584

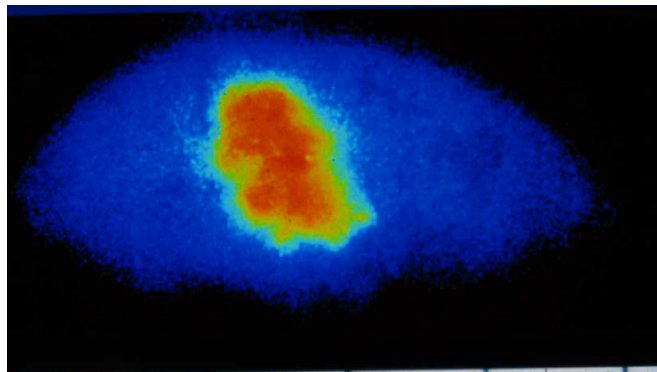
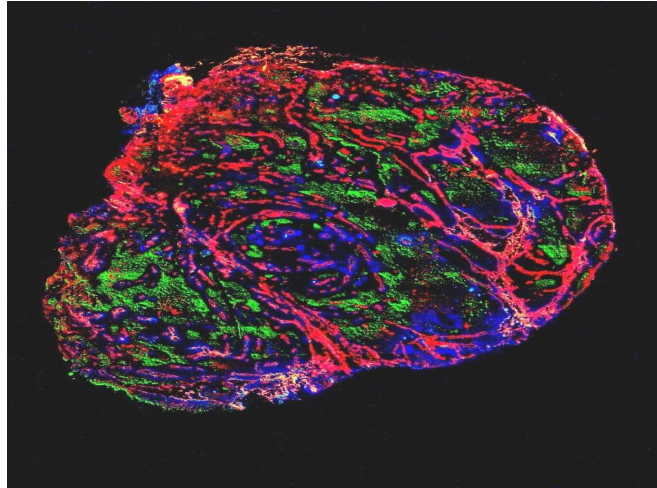
Research portfolio & strategic aims



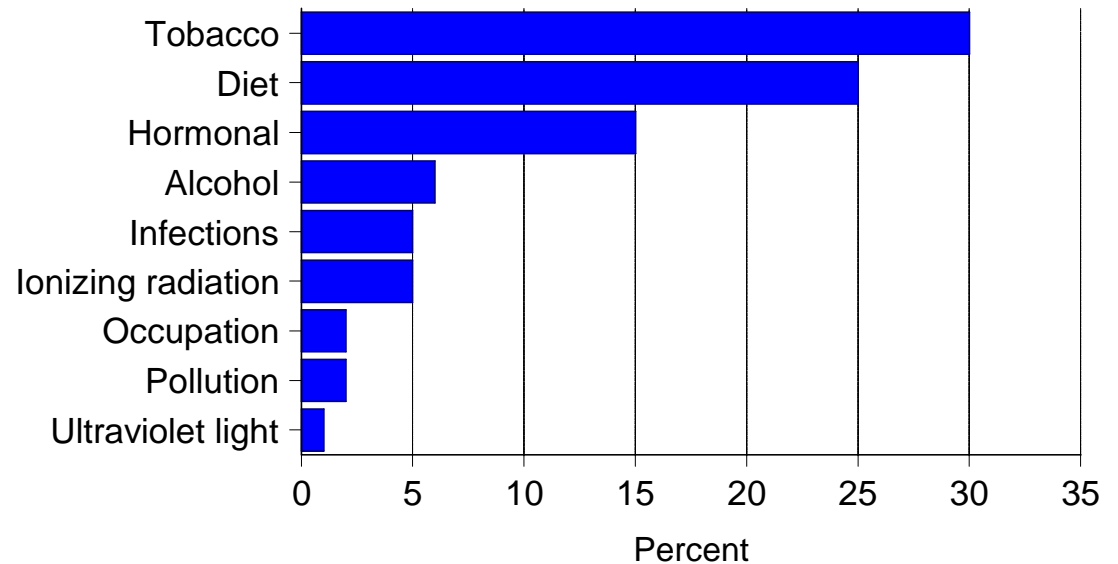
How is the research portfolio addressing tomorrow's cancer burden?

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects

Research assessment to define 'value'



Which type of research is more 'valuable'?



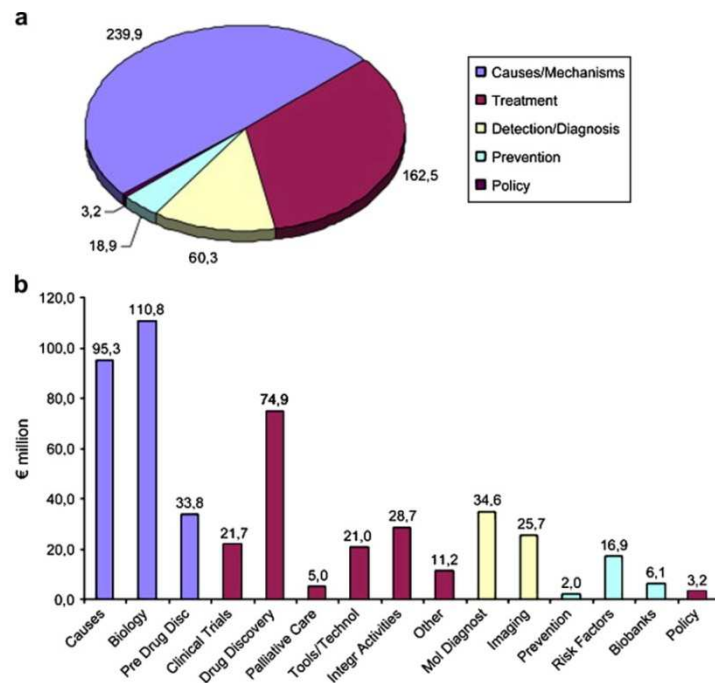
Adapted from Doll and Peto, 2003

Understanding 'drivers' of research e.g. £££

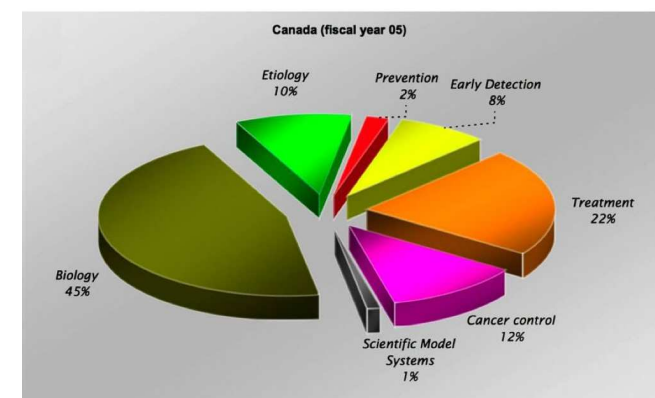
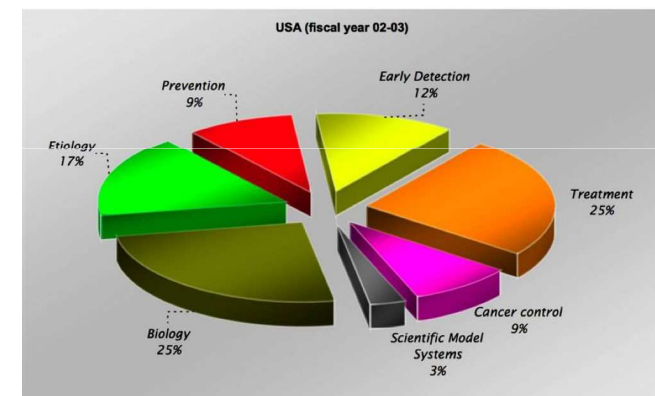
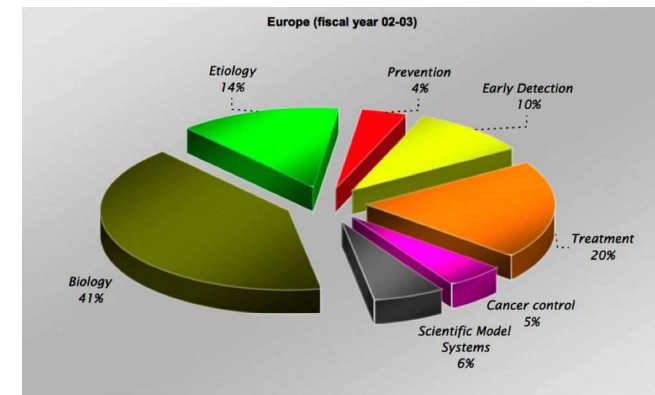
What are the research gaps?

Is this due to a lack of investment or lack of faculty & proposals?

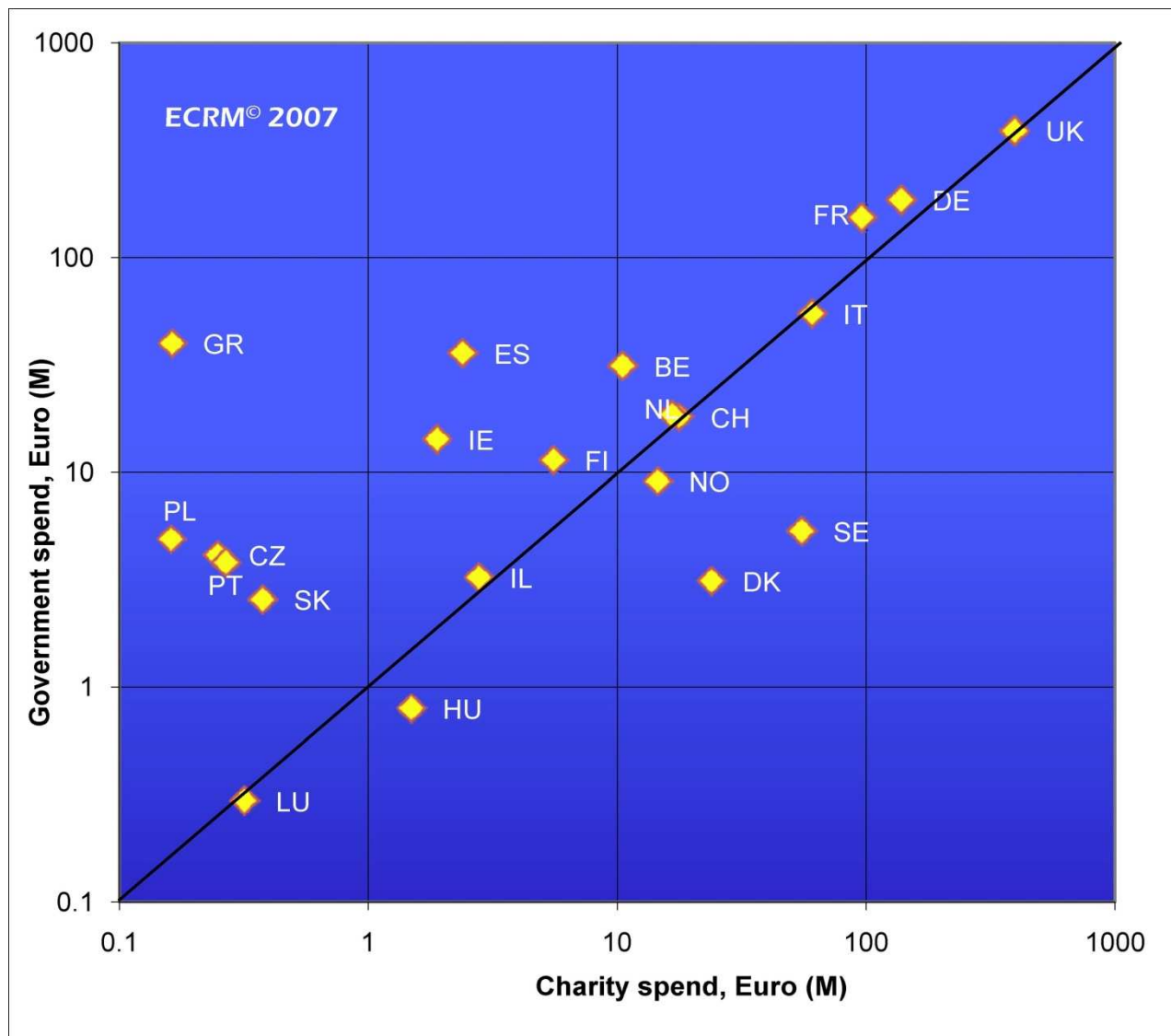
Relationship between funding and outputs/impact



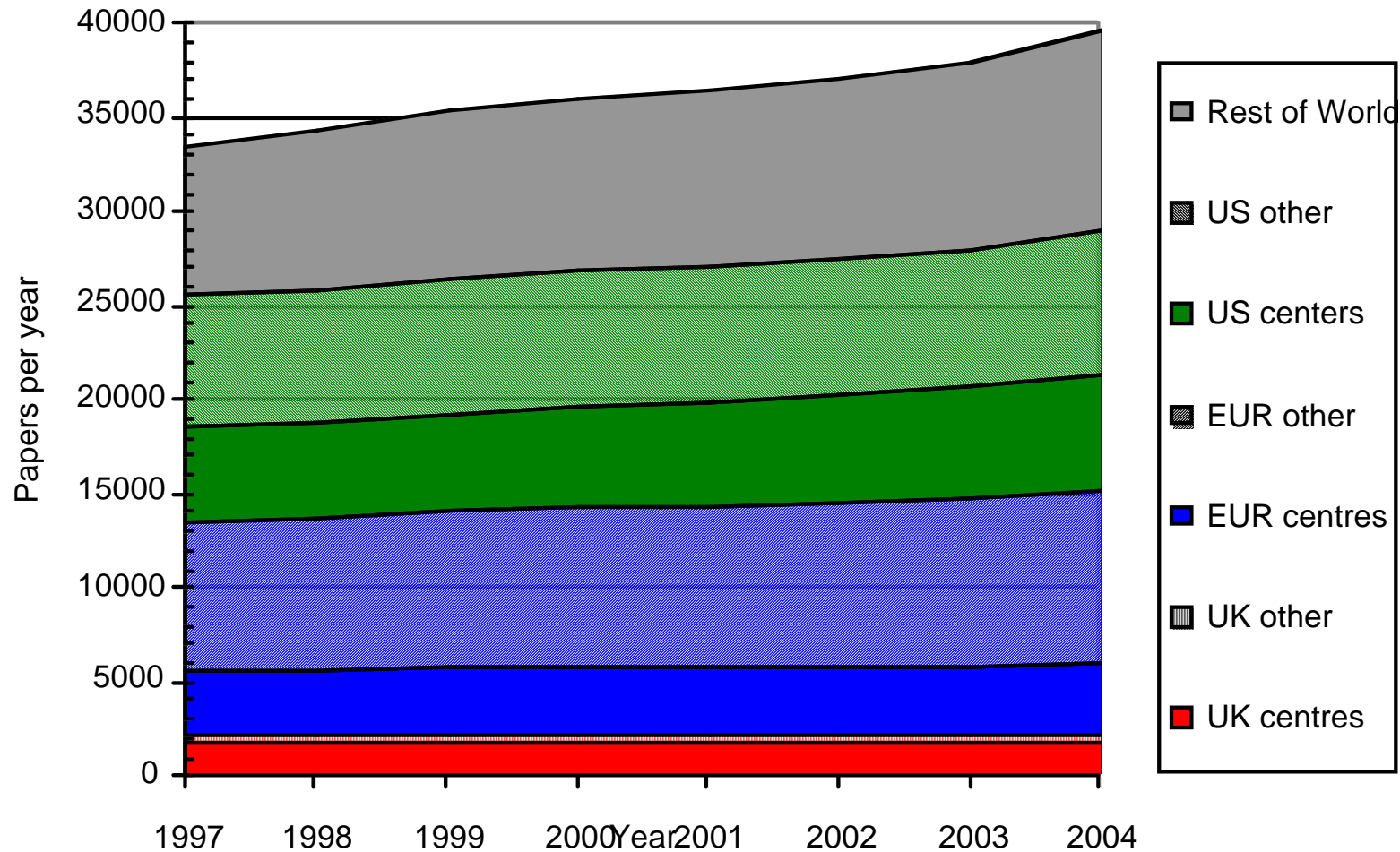
Trends in the global funding and activity of cancer research.
Molec. Onc. 2008, 2: 20-32



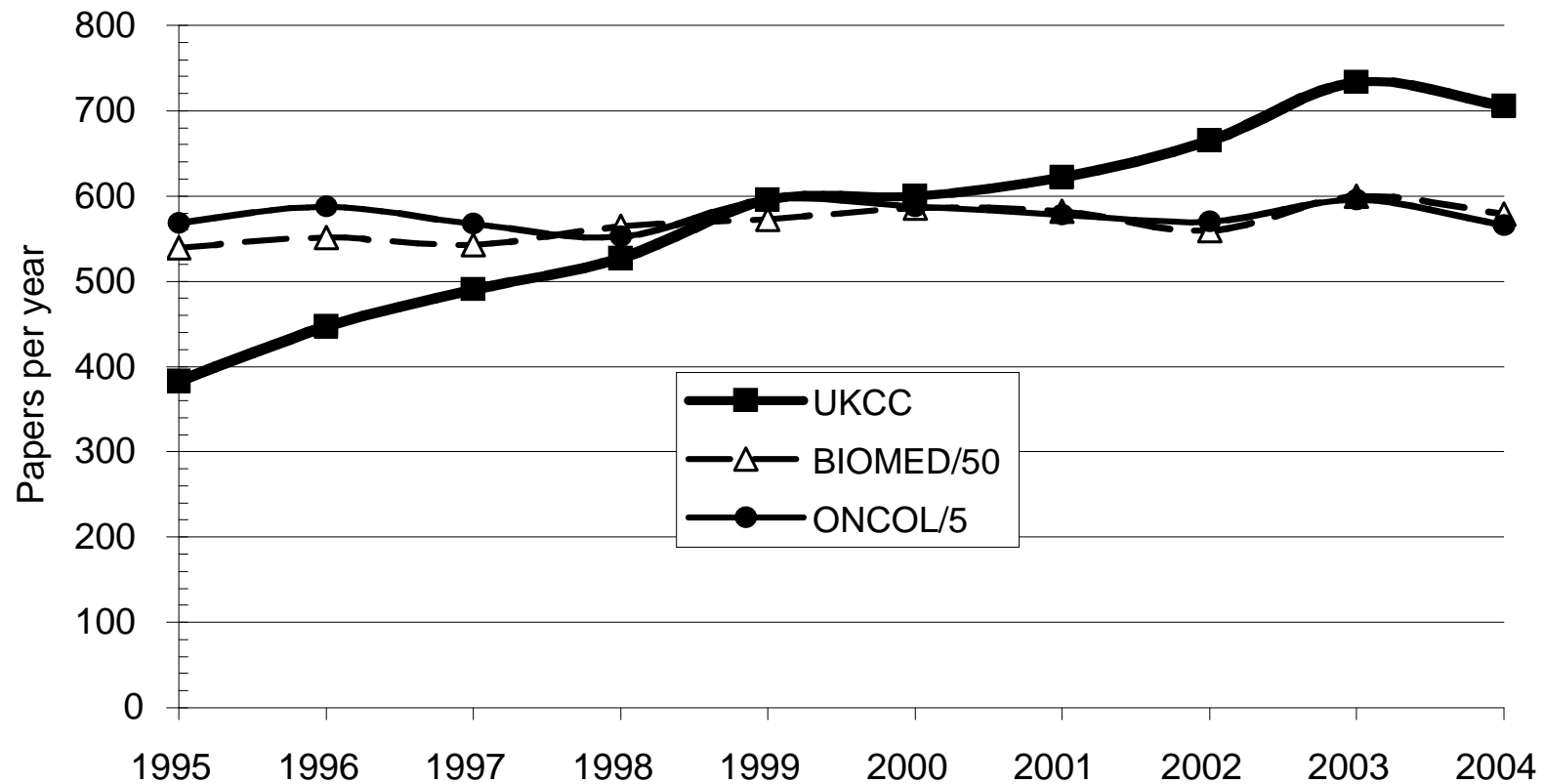
Comparative fiscal analysis



Organisation: Centre(s) and networks

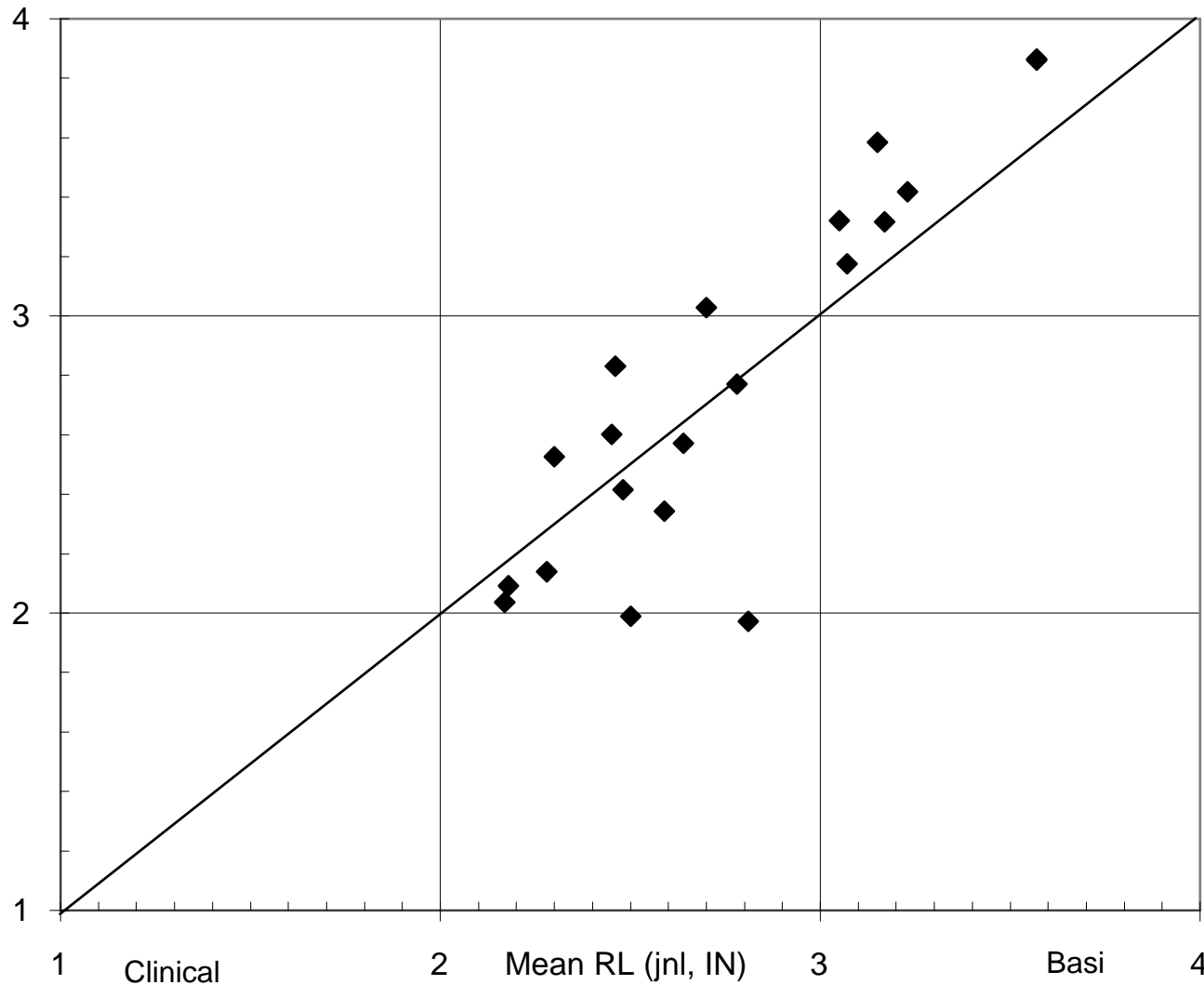


UK cancer centres set the national strategy



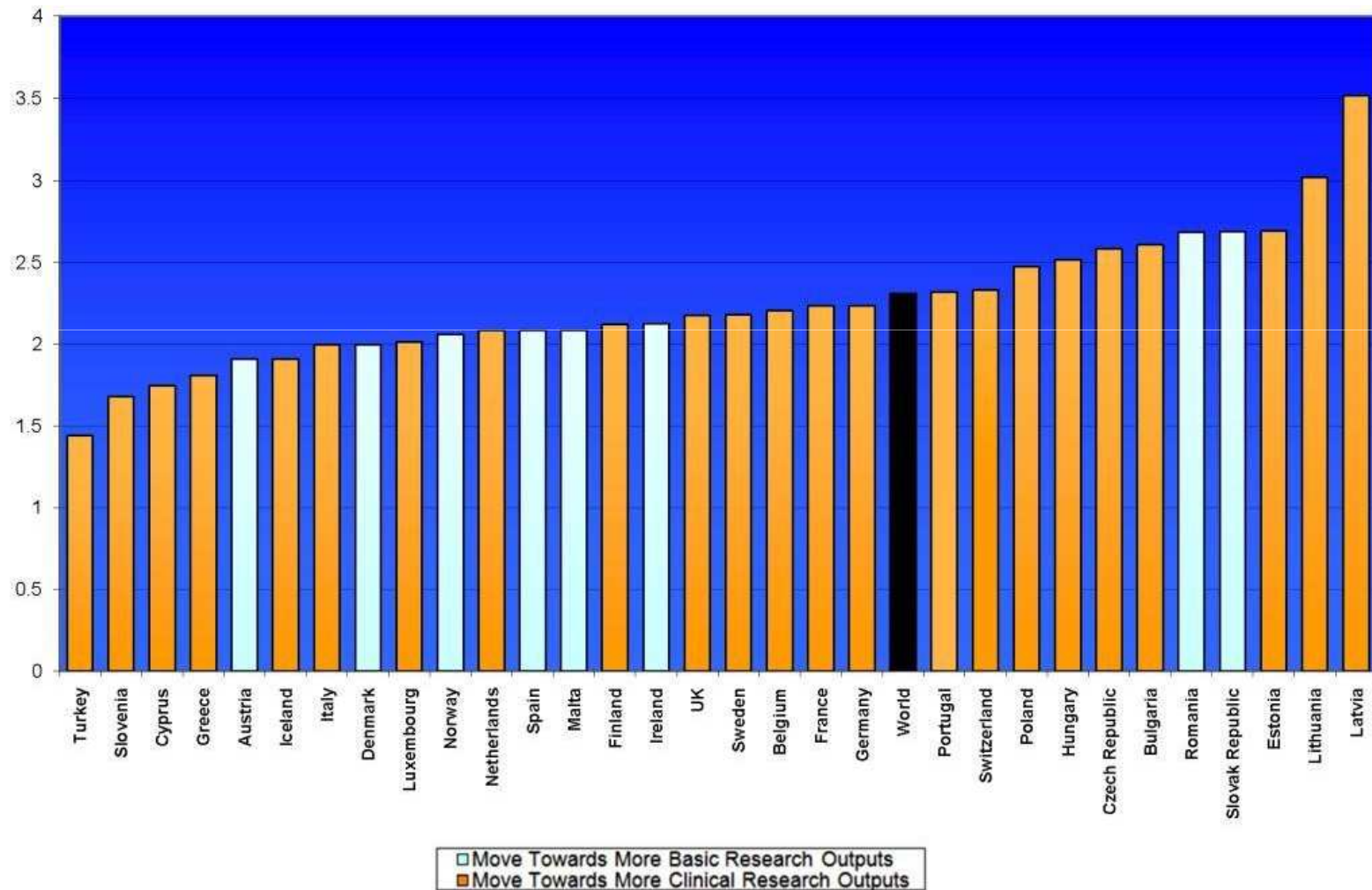
Lewison, G Purushotham, AD Sullivan R. Heterogenous nature of cancer centres in the UK: an analysis of trends (in prep.)

Cancer Centres in France: SWOT assessment



ECRM Foundation. Cancer Centres in Europe and the USA: a critical analysis (in prep.)

Bibliometrics as strategic intelligence



Research assessment as a CAS

Research activity is essential for high quality patient outcomes
Feels like a rationale statement

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R E V I E W A R T I C L E

Improving Cancer Outcomes Through International Collaboration in Academic Cancer Treatment Trials

*Edward L. Trimble, Jeffrey S. Abrams, Ralph M. Meyer, Fabien Calvo, Eduardo Cazap, James Deye,
Elizabeth Eisenhauer, Thomas J. Fitzgerald, Denis Lacombe, Max Parmar, Nita Seibel, Lalitha Shankar,
Ann Marie Swart, Patrick Therasse, Bhadrasain Vikram, Remy von Freneckell, Michael Friedlander,
Keiichi Fujiwara, Richard S. Kaplan, and Francoise Meunier*

du Bois et al. 2005

Pattern of care and impact of participation in clinical studies on the outcome in ovarian cancer. *International Journal of Gynecological Cancer* 2005;**15**: 183–191.

du Bois et al. 2009

Variations in institutional infrastructure, physician specialization and experience, and outcome in ovarian cancer: A systematic review. *Gynecologic Oncology* 2009;**112**: 422–436.

Robinson et al. 2009

Clinical trial participation is associated with improved outcome in women with ovarian cancer. *International Journal of Gynecological Cancer* 2009;**19**: 124–128.

But the data is complex and variable in terms of quality

Many metrics proposed for cancer have little if no 'linkage' with outcomes

Many metrics have complex interdependencies

Natural Experiments

Finnish Leukaemia Group 1979
– 1985 introducing clinical trials
into 17 out of 21 hospital districts
in Finland for the treatment of
multiple myeloma matched to
comprehensive Finnish registry
data

“A natural experiment”

Do treatment protocols improve end results?
A study of survival of patients with multiple
myeloma in Finland. Karjalainen S, Palva I.
BMJ 1989 Oct 28;299(6707):1069-72.



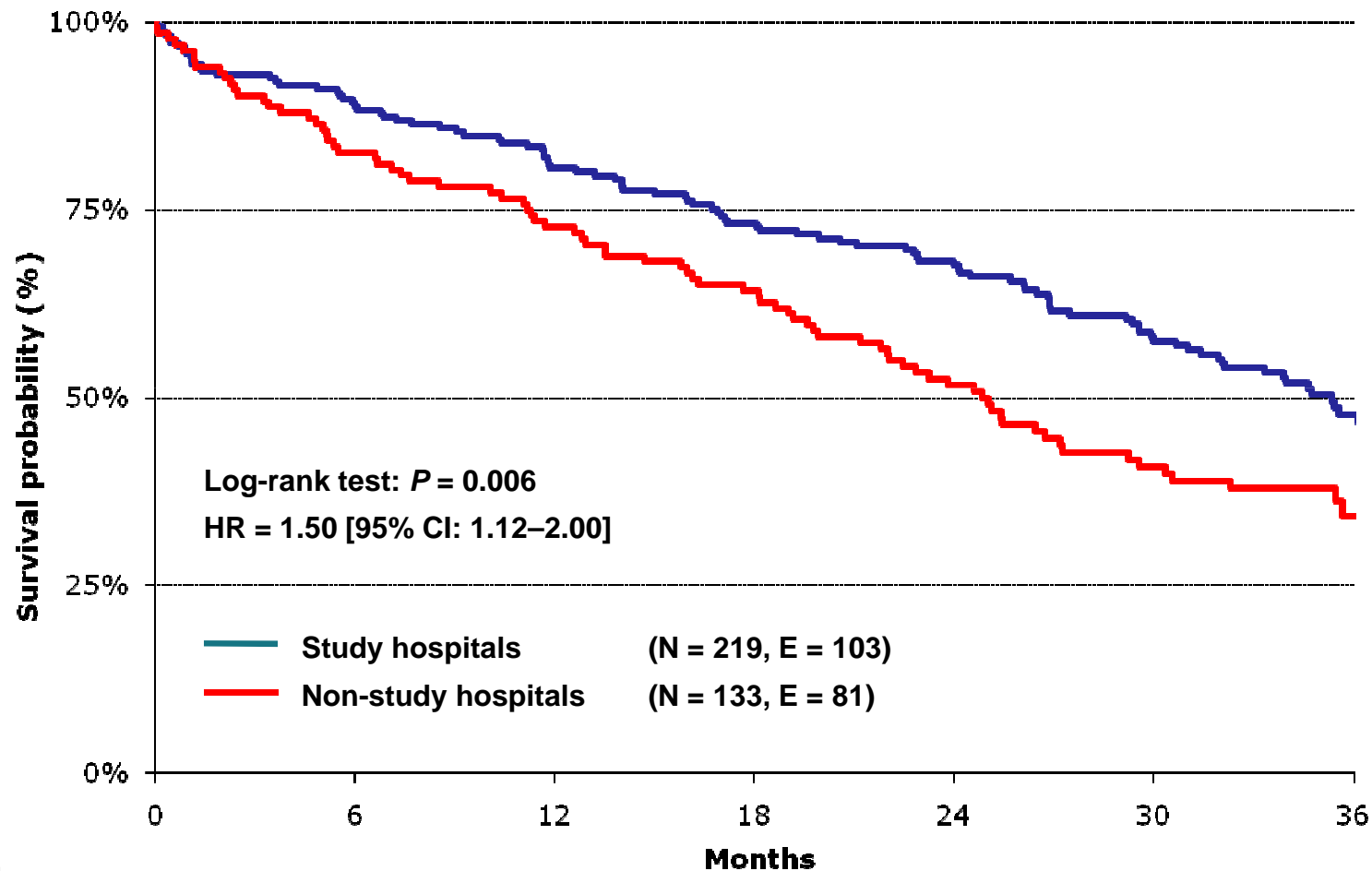
(Karjalainen S et al, BMJ 1989)

Numbers and five year (cumulative) relative survival rates in patients with multiple myeloma under 71 years of age in Finland in 1959-85 by time of diagnosis and area

Area	Time of diagnosis					
	1959-78			1979-85		
	No of pts	Five year relative survival rate (%)	95% Confidence interval	No of pts	Five year relative survival rate (%)	95% Confidence interval
Trial	948	23.9	20.9 to 26.9	405	37.8	32.0 to 43.6
Reference	461	27.8	23.2 to 32.4	164	27.5	19.2 to 35.8

Overall survival in ovarian cancer FIGO IIB–IV

Pts in study hospitals vs. pts in non-study hospitals

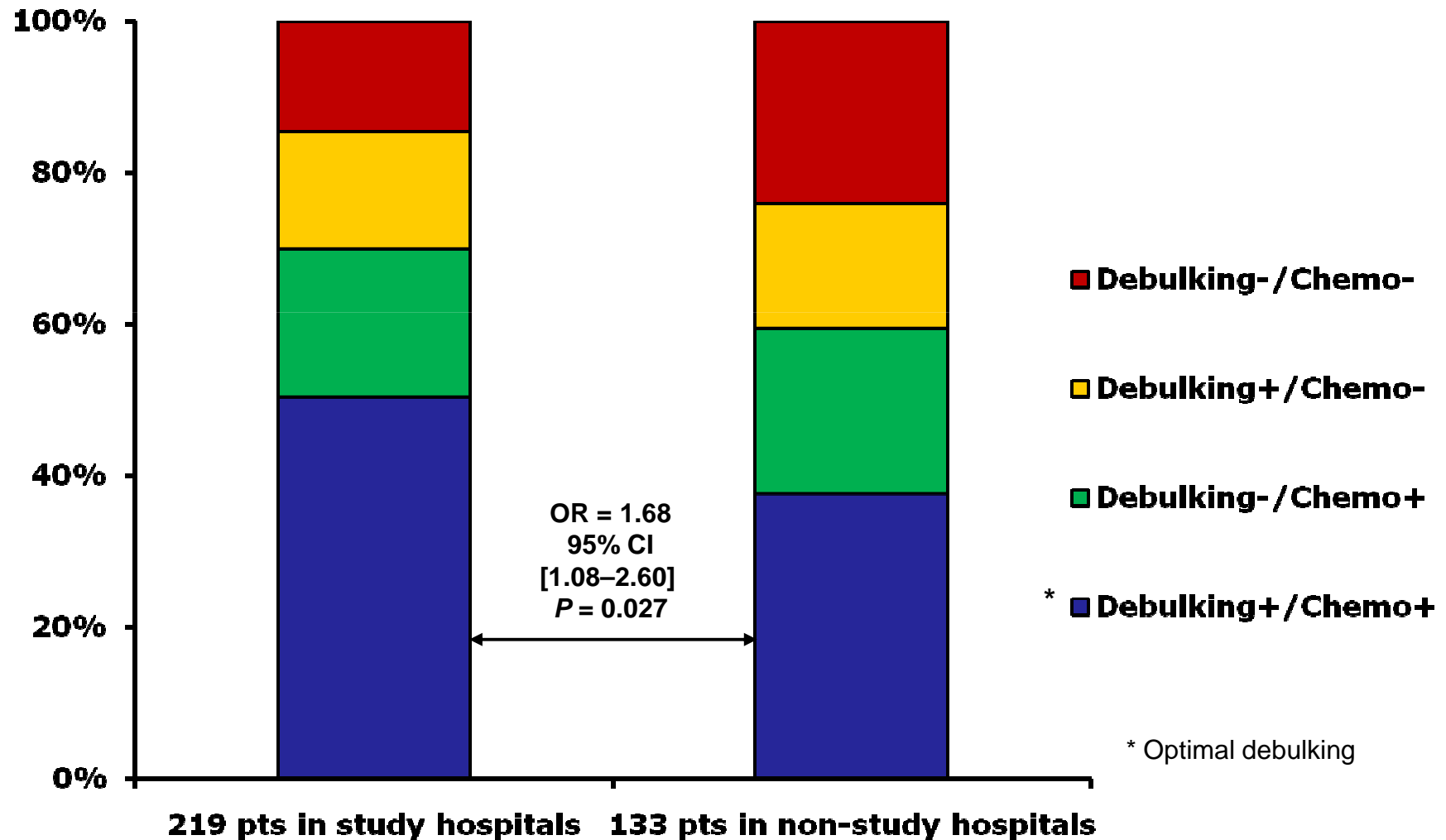


No. at risk		Months						
	0	6	12	18	24	30	36	
Study hospitals	219	187	166	149	129	100	43	
Non-study hospitals	133	109	95	83	63	43	15	

Justine Rochon. U. Regensberg. AGO Ovarian Cancer Study Group

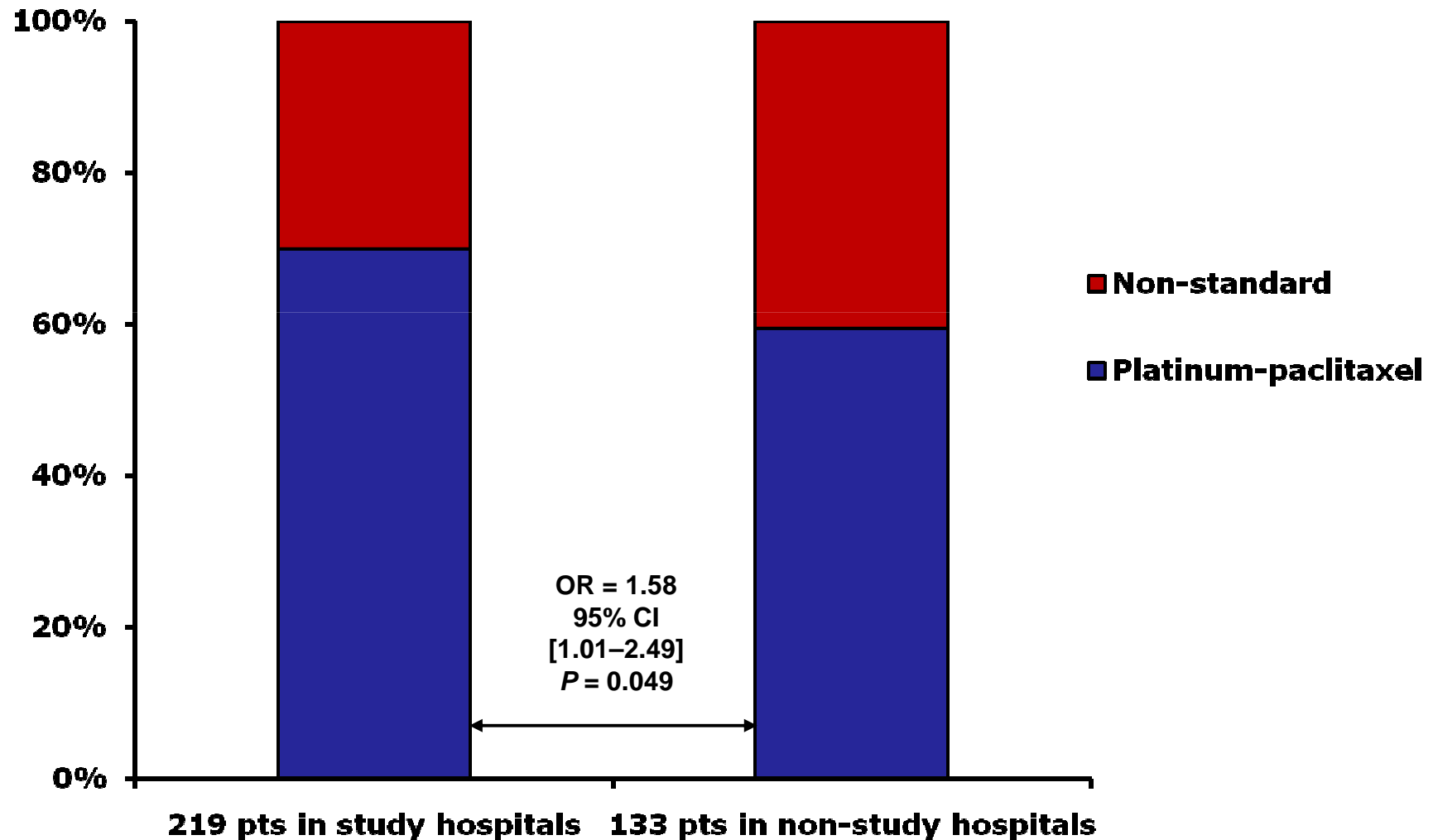
Treatment in ovarian cancer FIGO IIB-IV

Pts in study hospitals vs. pts in non-study hospitals



Chemotherapy in ovarian cancer FIGO IIB–IV

Pts in study hospitals vs. pts in non-study hospitals



Quality or 'value' is a complex interdependent phenomenon. Requires multiple metrics, preferably expressed as trends with suitable comparators. CANNOT remove the subjective part of 'peer review'. Research assessment is a complex adaptive system

- Metrics should be used to illuminate not support. Needs to be developed within policy and strategic framework.
- Need a more global perspective and be clear about aims
- Need to address foundational issues in cancer research such as the need to enhance creativity. Metrics can have the opposite effect by promoting dogma.
- Greater uncertainty of the social value of research: use metrics to gain policy-maker, public engagement, as well as leverage fundraising.

(Giovanni Apolone *et al.* A new anti-cancer drug in the market: Good news for investors or patients? *EJC* 2008, 44: 1786-88)