

Actual cost of Cancer Medicines

OECD Economics WG Session 2025

dr. Nora Franzen

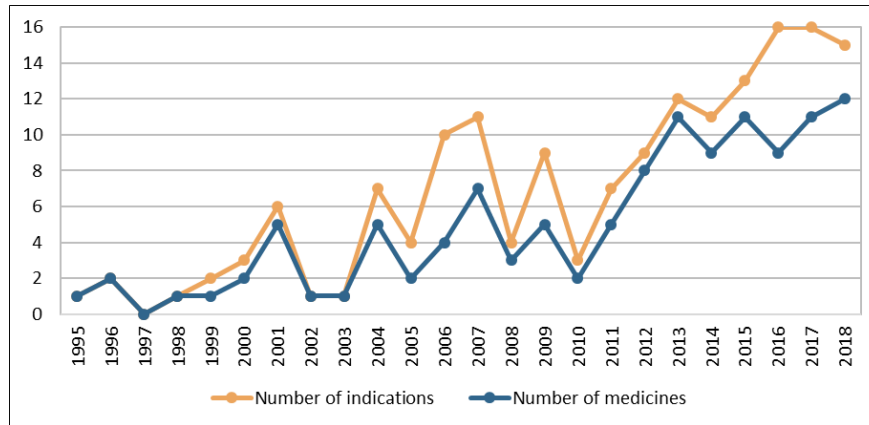
Current work: **Assistant Professor, Erasmus School of Health Policy & Management (ESHPM)**
Organisation of Cancer Services (Networking, Concentration, Dispersion, Integration)

Presented work: **Research group of Prof. van Harten & Prof. Retel**



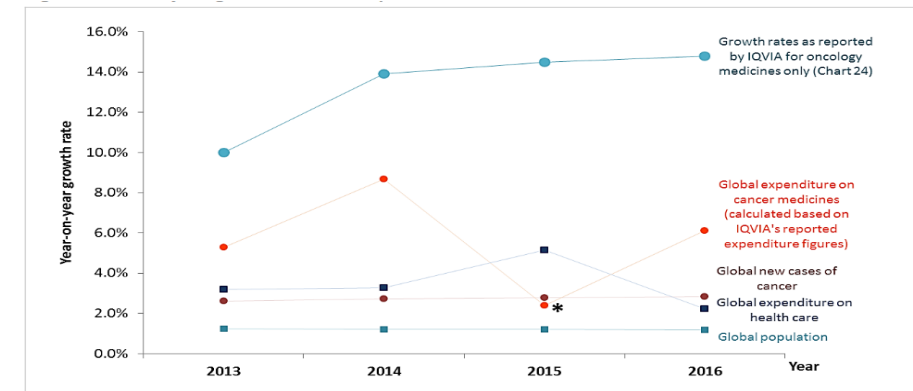
The context

Impressive pipeline in oncology



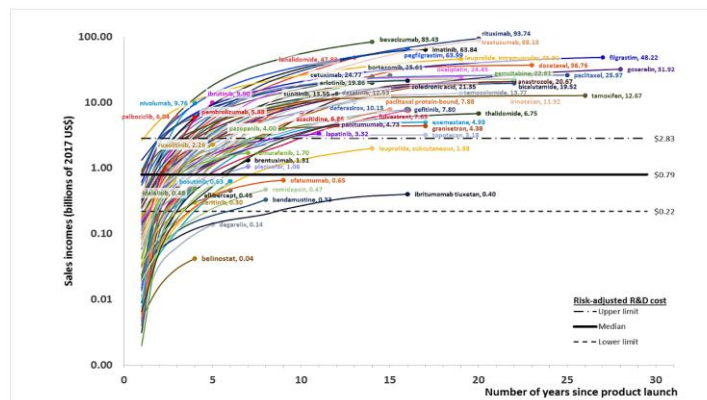
118 EMA-approved cancer medicines, 1995–2018

Increasing cost



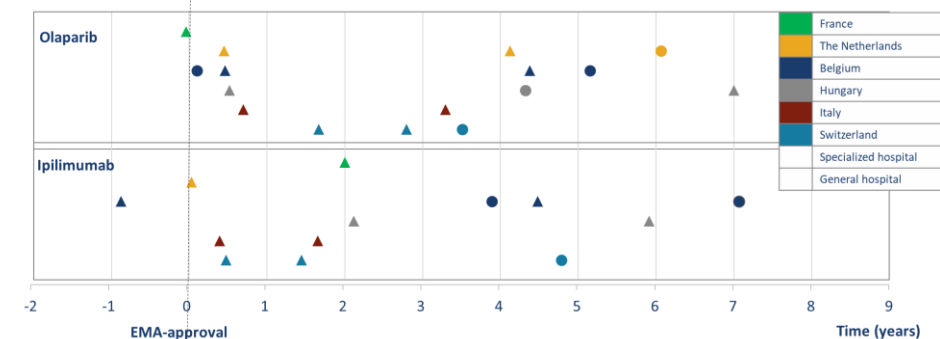
Growth rate oncology medicine costs ~15%

Highly profitable, risky, inefficient R&D



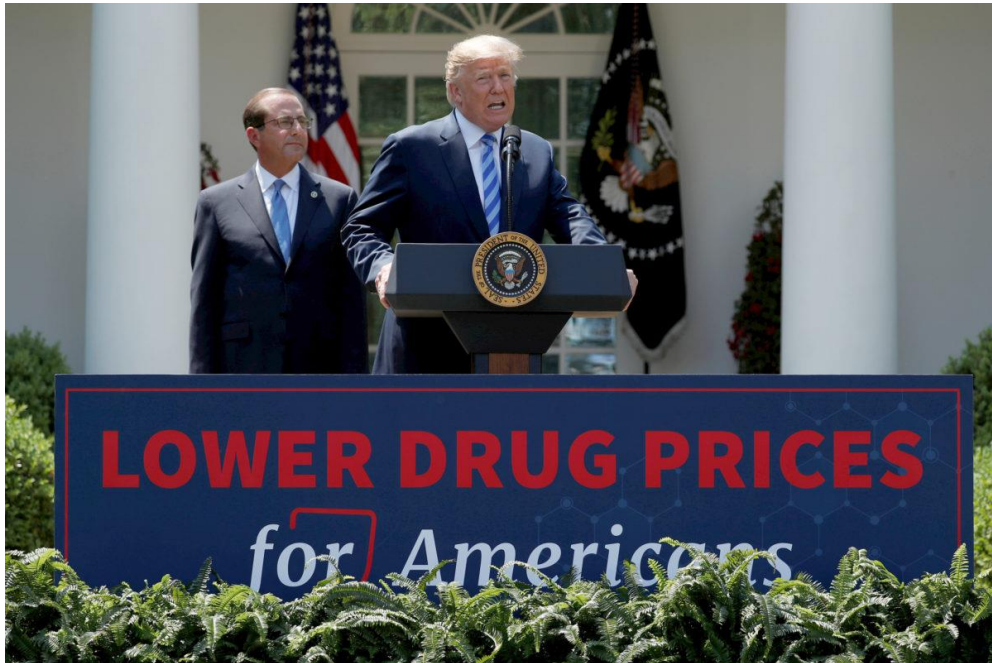
Median to recover risk-adjusted R&D cost is 3-5 years

Unequitable access for patients



Up to 8 years difference in access for patients

Research on actual cost of medicines could not be more timely



On May 12, 2025, US-president Trump issued an EO titled *"Delivering Most-Favored-Nation Prescription Drug Pricing to American Patients."*

It directs HHS, CMS, Commerce, FDA, and the U.S. Trade Representative to link U.S. drug prices to the lowest price paid in OECD countries with at least 60% of U.S. GDP per capita



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PASYKAF

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krebshilfe schweiz
ligue suisse contre le cancer
liga svizzera contro il cancro

Kom op
tegen Kanker

Irish
Cancer
Society

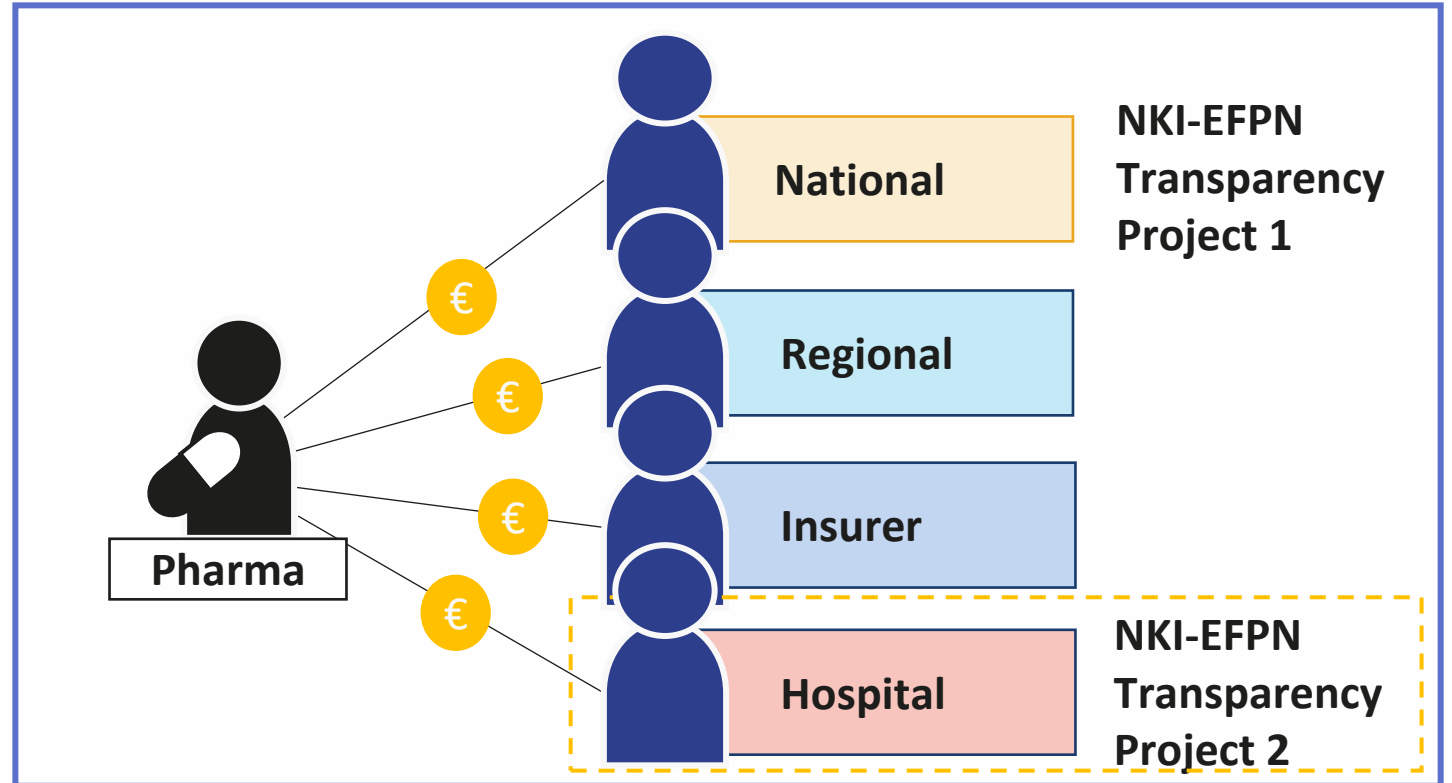
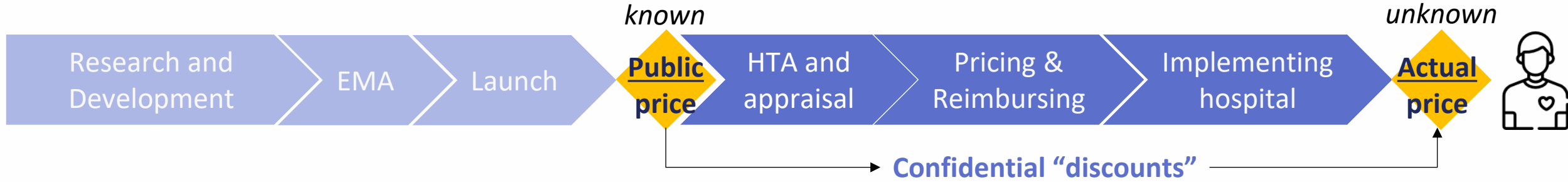
ECL

NORDIC
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UNION

KWF
Dutch Cancer Society

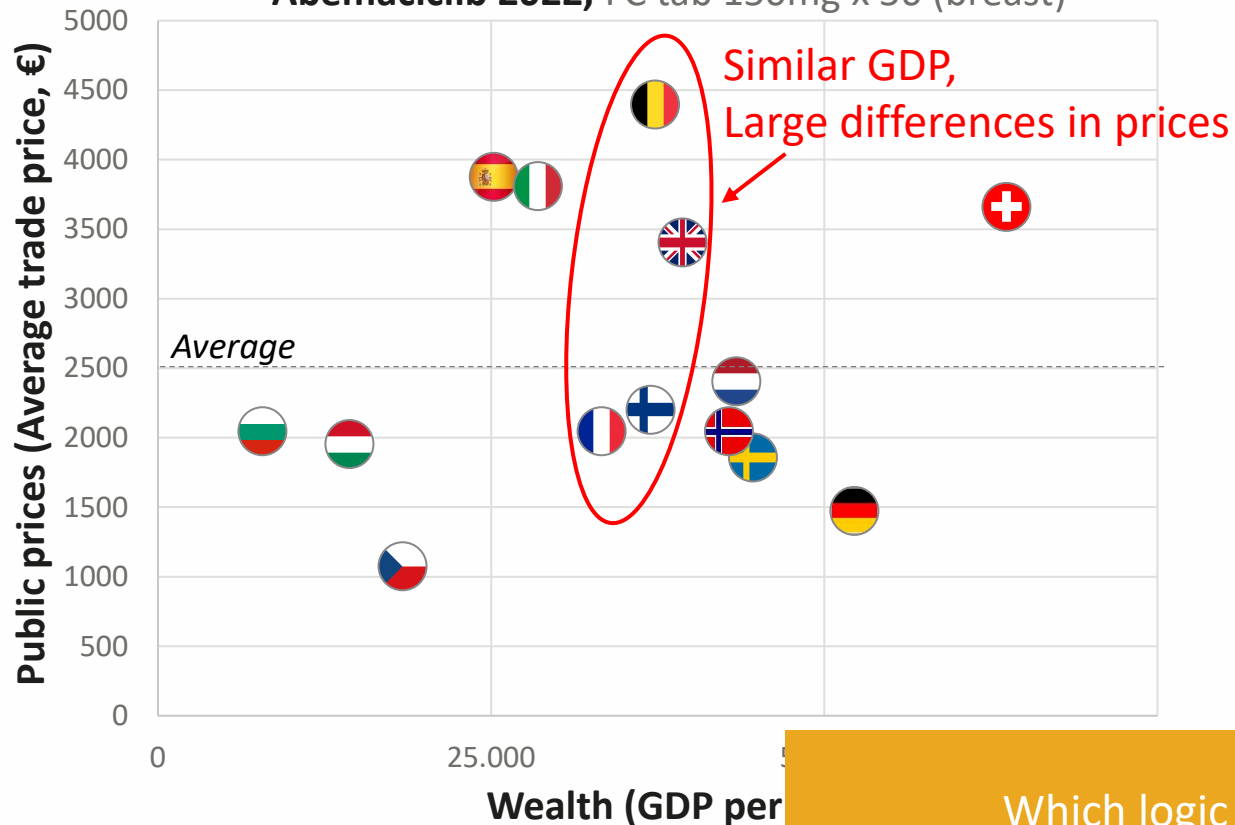
OECD
Organisation for Economic Co-operation and Development

Actual prices of medicines are unknown

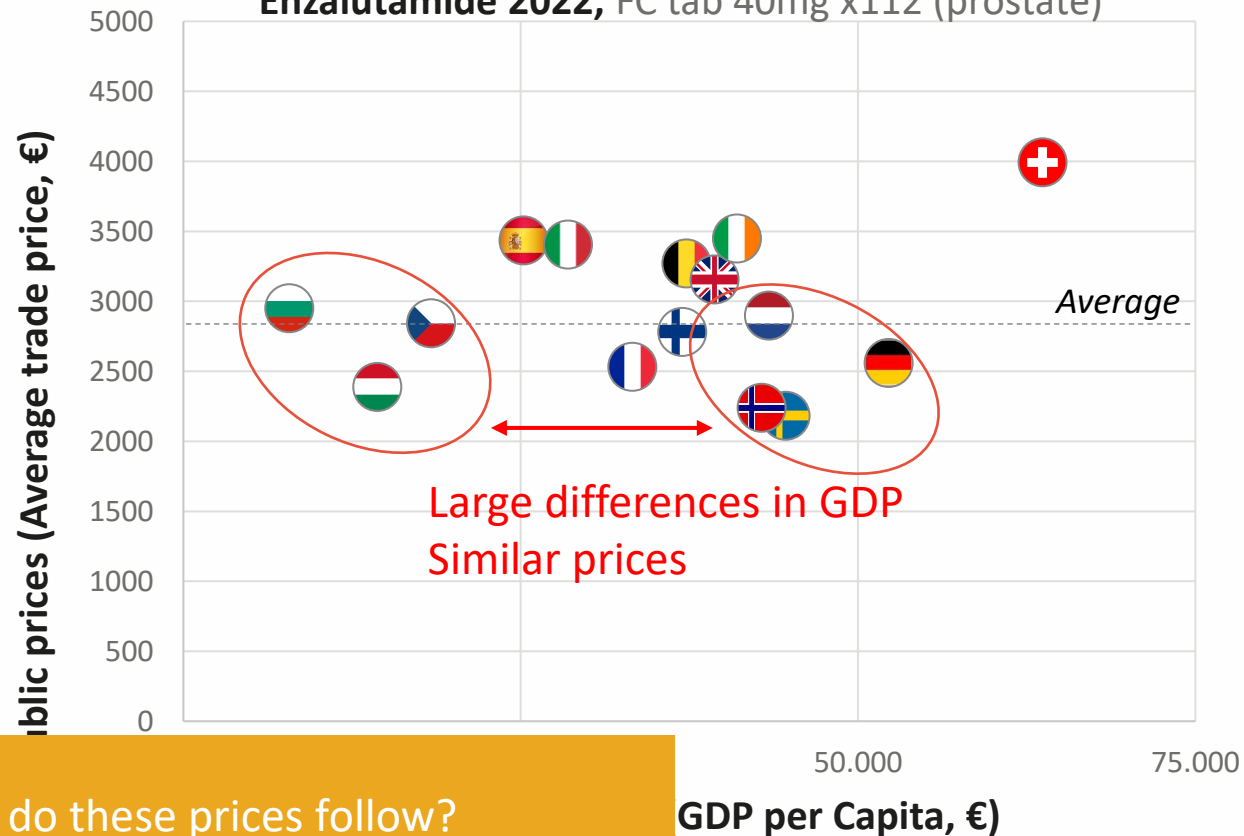


Price information for accountability

Abemaciclib 2022, FC tab 150mg x 56 (breast)



Enzalutamide 2022, FC tab 40mg x112 (prostate)



Which logic do these prices follow?
Who sets them?
Are they fair?



METHODS

Julie Vancoppenolle, Nora Franzen,

Cristina Andrianò, Morten Baltzer Houlind, Zora Ćetković, Aniek Dane, Albane Degrossat Theas^{9,10}, Anne-Marie Eldering-Heldens¹¹, Martin J. Hug¹², Holger Knoth¹³, Vito Ladisa¹⁴, Péter Vajda¹⁵, Ulrich Warnke¹⁶,

Valesca Retèl, Wim van Harten



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Methods

- **Cross sectional observational study**

- Interviews with European hospital pharmacists & financial administrators

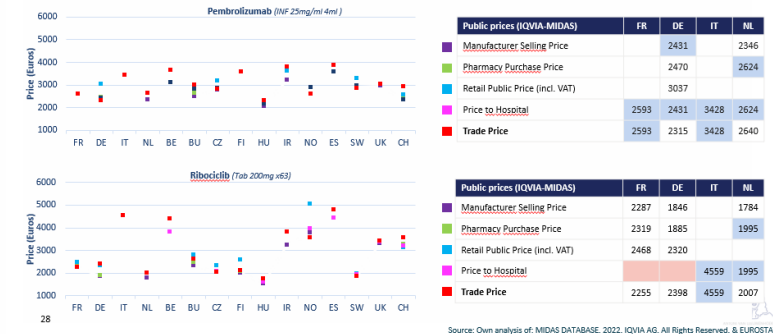
- **Data collection**

- December 2023 – August 2024
- 2022 actual prices at hospital level
- 15 cancer medicines

- **Analysis**

- Descriptive statistics only showing averages due to commercial sensitivity
- Actual price_{Hospital} -> *harmonized* -> Product price_{Hospital} -> *aggregated* -> Product price_{National}
- Public prices (list/references): Average Trade price of the IQVIA-MIDAS dataset
- Discount_{National}
- Price perception of participants

Many different public prices exist



Collecting very sensitive data



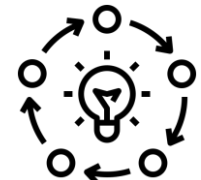
Stimulate participation



Legal counseling



Aggregation pathway



Adaptive Methodology

- **Product price per country** (>3 price points): *Average price of pembrolizumab (L01FF02) in the Netherlands*
- **Product price per country group**: *Average price of pembrolizumab (L01FF02) in South Europe*
- **Price/Discount of product group per country**: *Average discount of selected PD-1/PDL-1 inhibitors (L01FF)*

Selection of medicines

Selection criteria:

- Oncology or hematology
- Budget impact, high price
- Accessibility & Significance
- Aggregation
- Competitive context

Medicine	ATC4 group
IBRUTINIB	BTK-inhibitors
ACALABRUTINIB	BTK-inhibitors
DARATUMUMAB	CD38 -inhibitors
ISATUXIMAB	CD38 -inhibitors
NIVOLUMAB	PD-1/ PDL-1 -inhibitors
PEMBROLIZUMAB	PD-1/ PDL-1 -inhibitors

Monopoly

- Patented
- No treatment alternatives

Medicine	ATC4 group
PALBOCICLIB	CDK-inhibitors
RIBOCICLIB	CDK-inhibitors
ABEMACICLIB	CDK-inhibitors
ENZALUTAMIDE	Anti-androgens
POMALIDOMIDE	Other immuno suppressants

Oligopoly

- Nearly/newly off-patent
- Some treatment alternatives

Medicine	ATC4 group
GEMCITABINE	Pyrimidine analogues
CAPECITABINE	Pyrimidine analogues
ABIRATERONE	Other hormone antagonists & related agents
LENALIDOMIDE	Other immuno suppressants

Competition

- Generics
- Multi-source

RESULTS

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krebsliga schweiz
ligue suisse contre le cancer
liga svizzera contro il cancro

Kom op
tegen
kanker

**Irish
Cancer
Society**

ECL
European Cancer
League

nou NORDIC
CANCER
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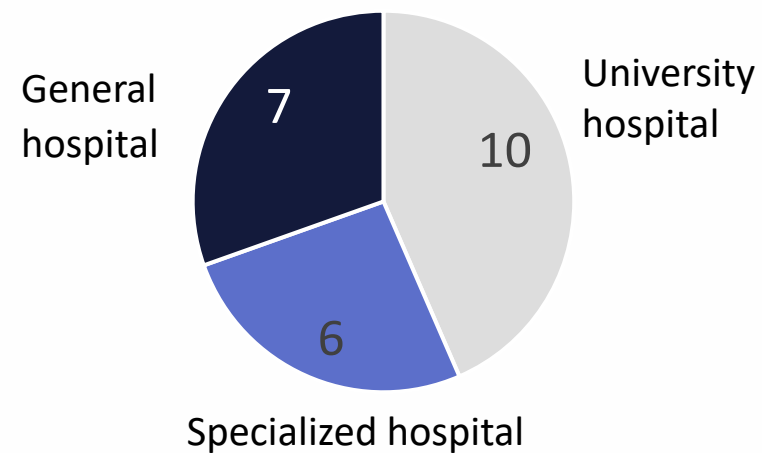
Results – Table 1

Country	Hospitals (N)
The Netherlands	6
Germany	4
Hungary	3
Serbia	3
Southern Europe (2 countries)	3
France	2*
Estonia	1
Northern Europe (1 country)	1
Total	23**

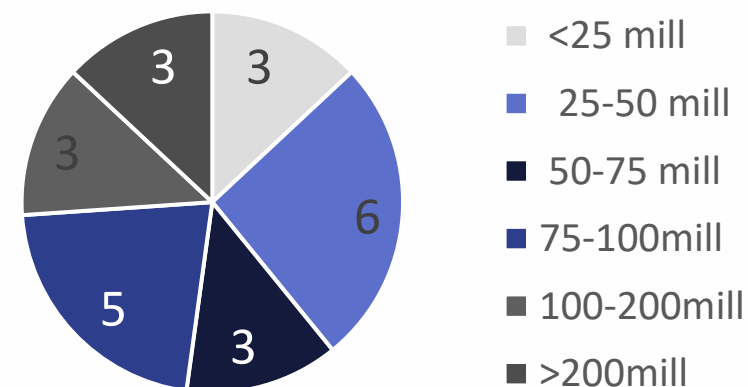
* 2 price points but representative for ~50 hospitals

** Out of 82 invited hospitals

Type of hospital

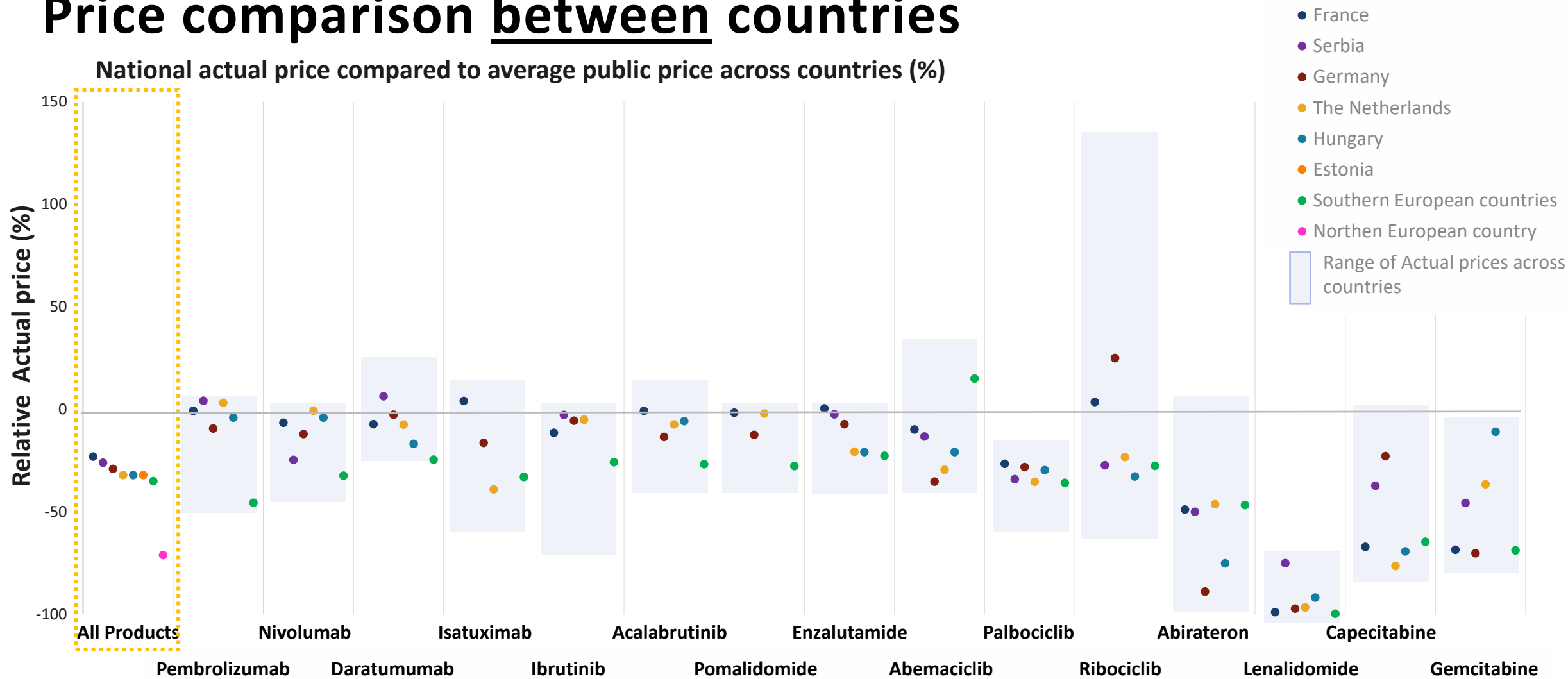


Pharmaceutical Volume (€)



Price comparison between countries

National actual price compared to average public price across countries (%)



Competition

Monopoly

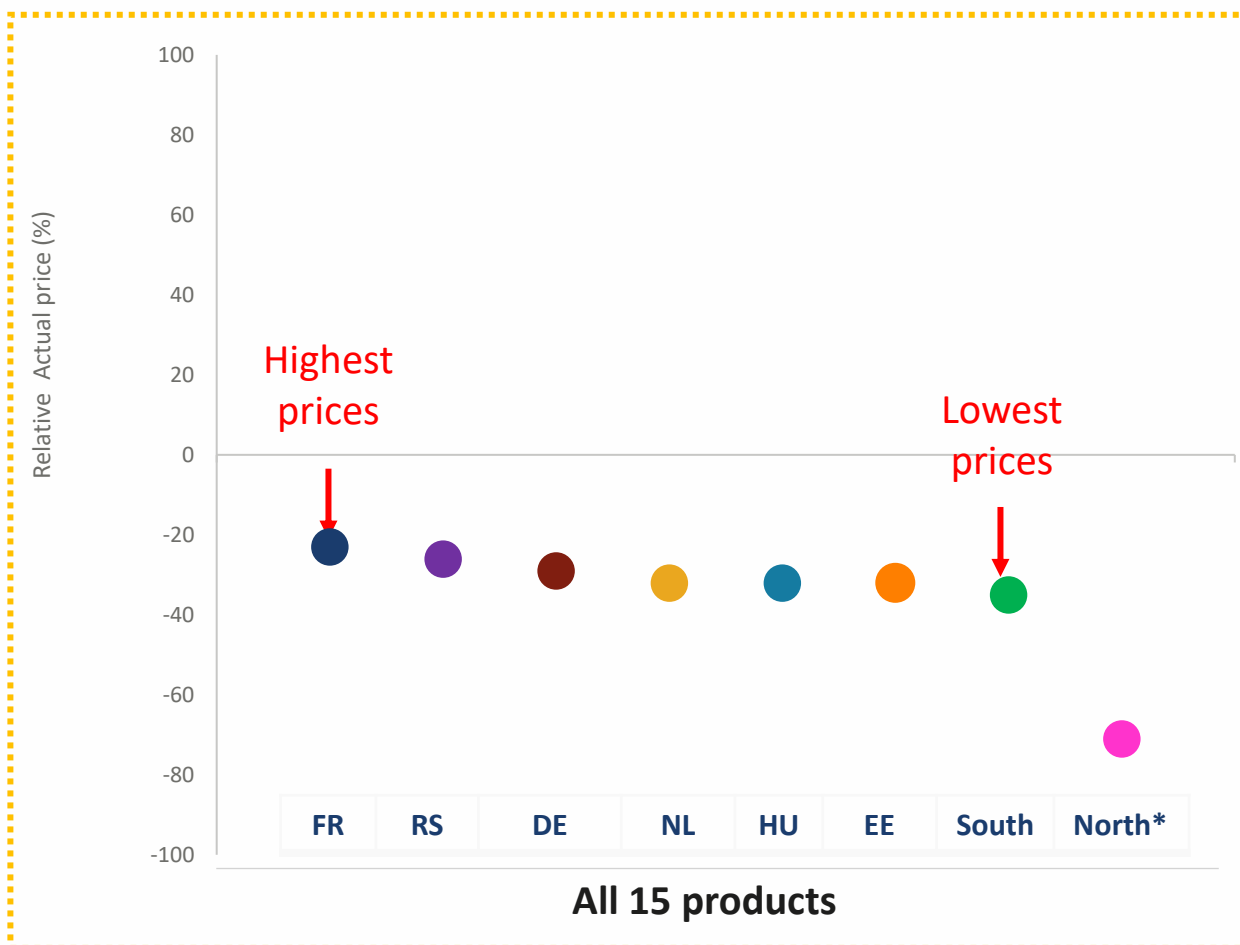
Oligopoly

Generic

Price comparison between countries

* National actual price compared to average public price across countries (%)

- France
- Serbia
- Germany
- The Netherlands
- Hungary
- Estonia
- Southern European countries
- Northern European country

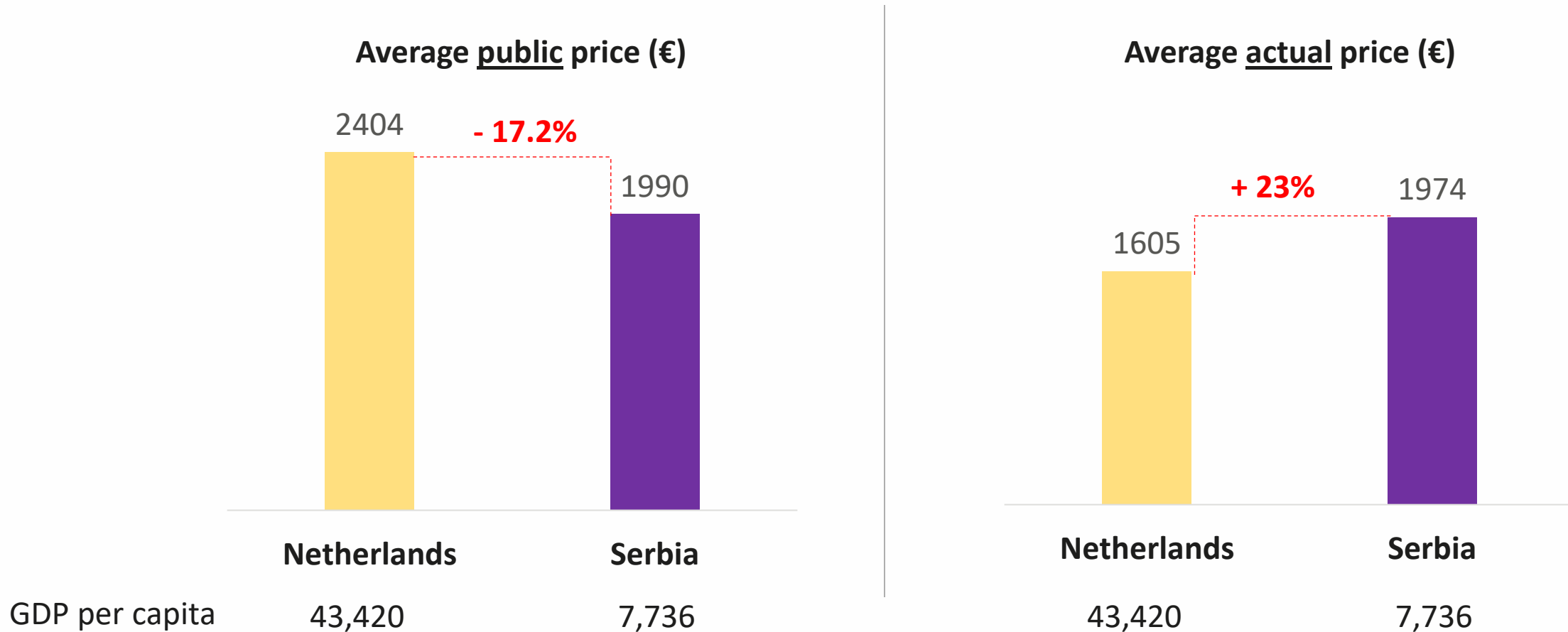


Careful with comparison between countries: differences in healthcare systems + reported product prices

*includes only prices for generic and oligopolistic products

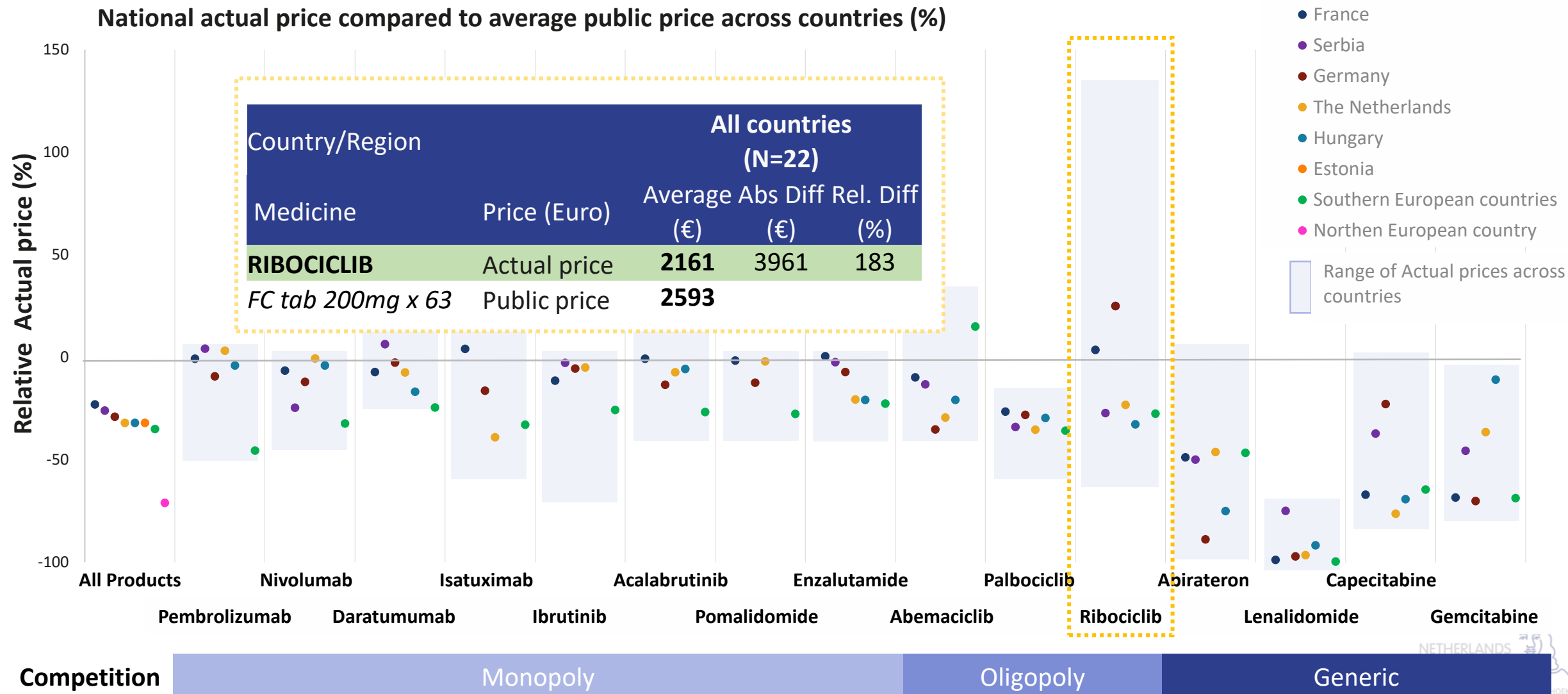
Lower wealth was not consistently associated with lower prices

Abemaciclib, tab 150mgx56



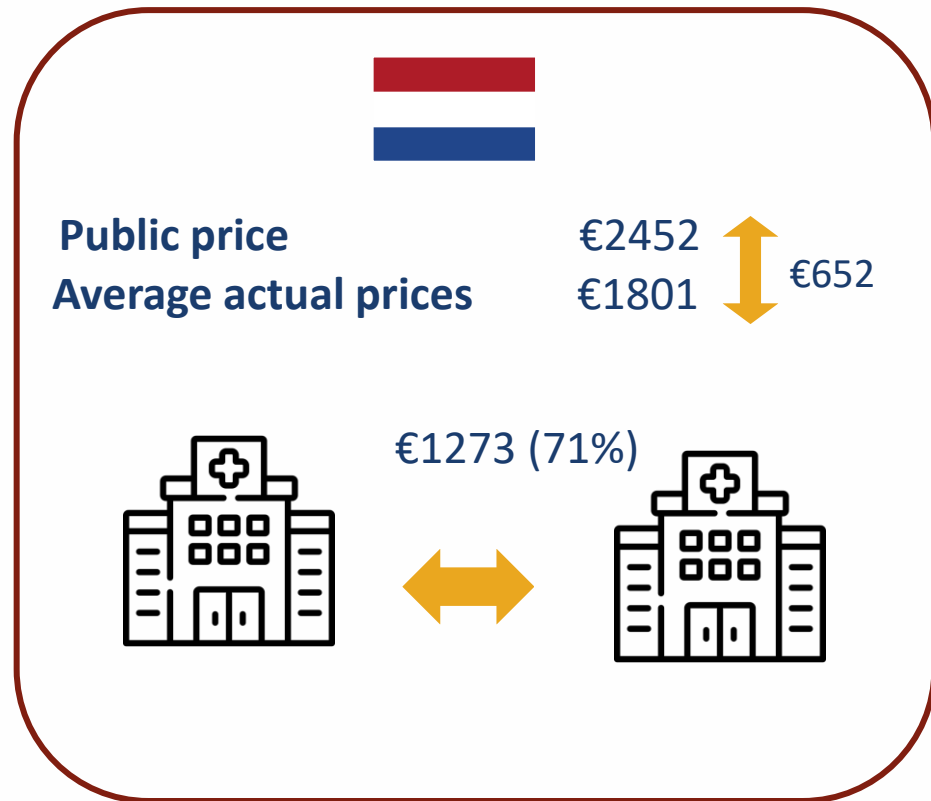
Largest price variation overall was observed for ribociclib

National actual price compared to average public price across countries (%)

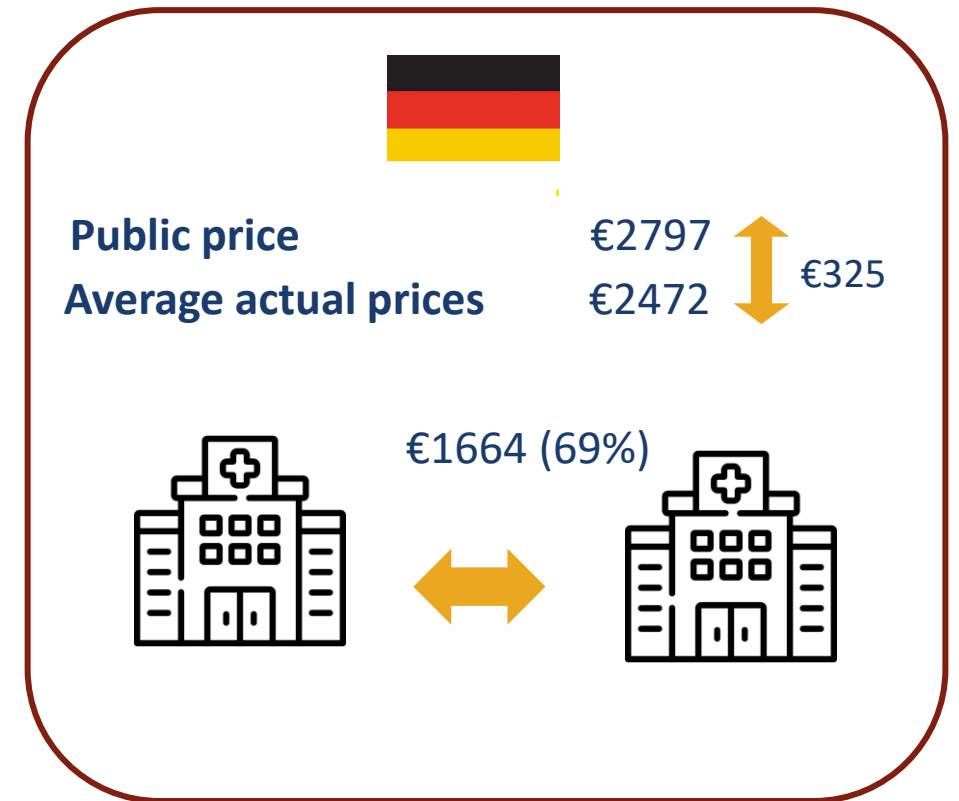


Large price differences exist within countries

Isatuximab, INF 20mg/ml 25ml, Multiple melanoma



- Lenalidomide difference in NL: € 927 (534%)
- Abiraterone difference in NL: € 2841 (196 %)



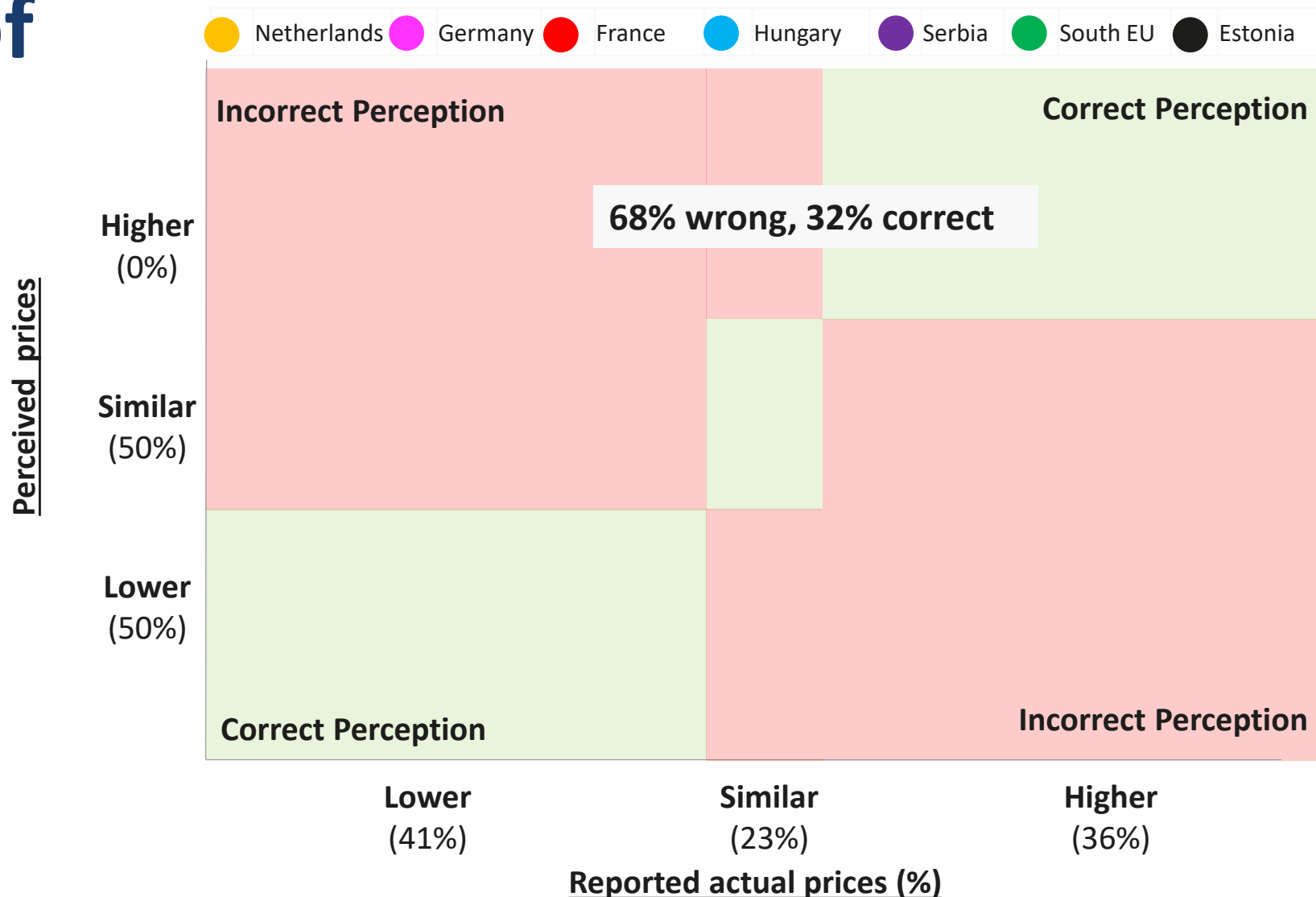
- Lenalidomide difference in DE: € 300 (213%)
- Abiraterone difference in DE: € 716 (239%)

Pharmacists' perception of their prices

Cooperation dilemma

- Negotiators want to know the prices of others
- Negotiators are hesitant to share prices (they think they are doing well in negotiations)

“Do you think that prices of your hospital are lower/similar/higher than prices of other hospitals in your region of Europe?”



DISCUSSION

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Discussion

- 23 hospitals; 9 EU countries
- Large differences between public prices and actual prices
 - Public prices are inaccurate proxies
 - No consistent patterns
- Large price differences within a country
 - *Comparison meaningful*
- Price differences between countries
 - Poorer countries do not consistently benefit from lower prices
 - *Careful with comparison*
- **Price perception:** Negotiators think that they get a good deal but that is often not true

Implications

- Public prices (list prices) should **not be used for reference pricing** between countries
- Hospitals can gain when paying attention to the **competitive situation (patent expiry)**
- Even if you think you are a good negotiator, **cooperation and information sharing pays out**
- Price information can help to pay **fair prices** between products and countries
- Society should **take charge of pricing decisions** and not leave it to companies.
What are we willing to pay for?

Acknowledgements

NKI Authors

Julie Vancoppenolle

Valesca Retèl

Wim van Harten

NKI Acknowledgments

Inge Eekhout

Pharmacy

Financial department

Legal department

EFPN

Dutch Cancer Society

Norwegian Cancer Society

Nordic Cancer Union

Kom op tegen Kanker

Pasykaf

Krebsliga Schweiz

Irish Cancer Society

Others

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Erasmus School of
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Assistant Professor, ESHPM

Research focus: Organisation of Cancer Services (Networking,
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Erasmus University Rotterdam

Questions?



Country/Regionz		All countries (N=22)			The Netherlands (N=6)			Germany (N=4)			Serbia (N=3)			Hungary (N=3)			Southern Europe (N=3)		
GDP per capita (2023)		39,525			43,420			35,630			7,736			20,648			20,000-40,000		
Medicine	Price (Euro)	Average (€)	Abs Diff (€)	Rel. Diff (%)	Average (€)	Abs Diff (€)	Rel.Diff (%)	Average (€)	Abs Diff (€)	Rel.Diff (%)	Average (€)	Abs Diff (€)	Rel.Diff (%)	Average (€)	Abs Diff (€)	Rel.Diff (%)	Average (€)	Abs. Diff(€)	Rel. Diff (%)
ABEMACICLIB	Actual price	1875	2274	121	1605	1376	86	1472	128	9	1974	0	0				2615	1008	39
FC tab 150mgx56	Public price	2360			2404			1472			1990			1935			3789		
RIBOCICLIB	Actual price	2161	3961	183	1852	413	22	3016	3791	126	1756	78	4				1749	340	19
FC tab 200mg x 63	Public price	2593									2			1745			4559		
PALBOCICLIB	Actual price	1702	653	38							1	517	31				1607	544	34
FC tab 125mg x 21	Public price	2696									0			1938			3600		
ACALABRUTINIB	Actual price	4488	2676	60													3801	1538	40
Cap 100mg x 56	Public price	5242			4840			4758						5279			5244		
IBRUTINIB	Actual price	4368	3597	82	4896	1225	25	4873	328	7	5019	25	0						
FC tab 420mg x30	Public price	5124			5810			5060			5107			4563			5475		
DARATUMUMAB	Actual price	4278	1138	27	4358	36	1	4584	260	6	5011	26	1						
INF 120mg/ml 15ml	Public price	4638			4887			4693			5061			4140			5101		
ISATUXIMAB	Actual price	2311	2168	94	1801	1273	71	2472	1664	67							1980	2030	102
INF 20mg/ml 25ml	Public price	2819			2452			2797									2885		
PEMBROLIZUMAB	Actual price	2265	1381	61	2611	26	1	2294	184	8	2634	13	0				1379	407	30
INF 25mg/ml 4ml	Public price	2661			2640			2315			2659			2330			1344		
NIVOLUMAB	Actual price	961	514	53	1077	99	9	952	138	15	817	296	36				733	404	55
INF 10mg/ml 10ml	Public price	1102			1019			978			1029								
POMALIDOMIDE	Actual price	6955	3098	45	7651	711	9	6845	1076	16									
Cap 4 mg x21	Public price	7787			8723			7346											
LENALIDOMIDE	Actual price	137	927	677	174	927	534	141	300	213	1250	6							
Cap 25 mg x21	Public price	6073			5513			3633			1172								
ENZALUTAMIDE	Actual price	2389	1246	52	2241	217	10	2619	317	12	2754	14							
FC tab 40mg x112	Public price	2678			2897			2851			2780								
ABIRATERONE	Actual price	1076	2841	264	1447	2841	196	300	716	239	1348	7	0				1435	2375	166
FC tab 500mg x56	Public price	2678			2445			3008			2918			2243			3243		
CAPECITABINE	Actual price	45	99	219	28	9	30	93	70	75	75	1	2	37	30	82	42	39	93
FC 500mg x120	Public price	127			153			138			77			88			121		
GEMCITABINE	Actual price	29	44	151	36	30	84	17	1	3	31	4	12	50	5	10	18	15	87
INF 100mg/ml 20ml	Public price	61			71			22			30			57			129		

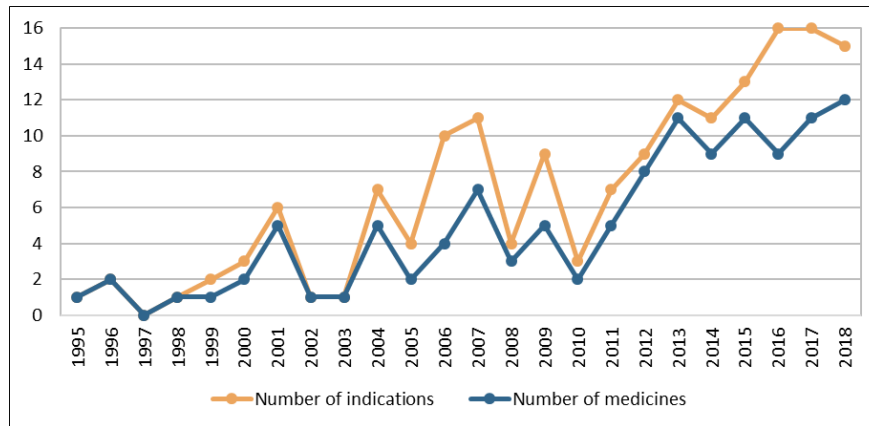
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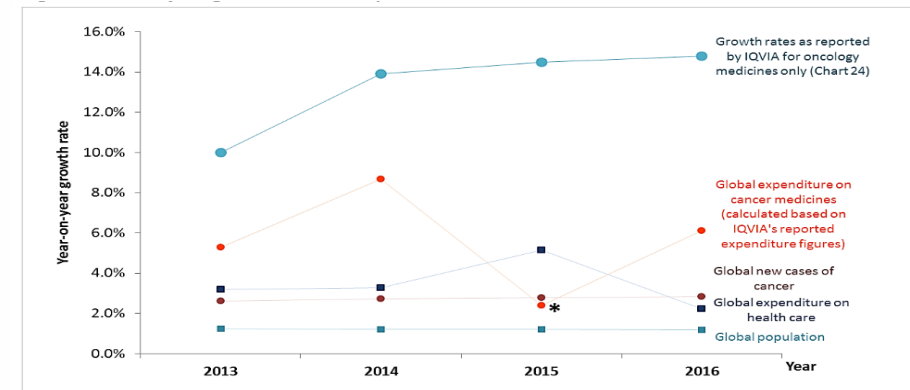
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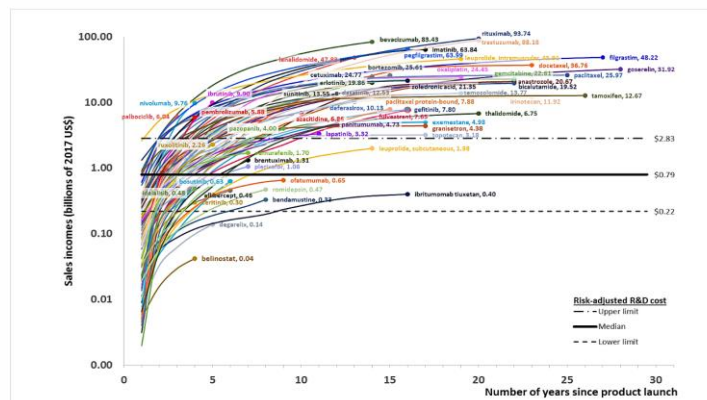
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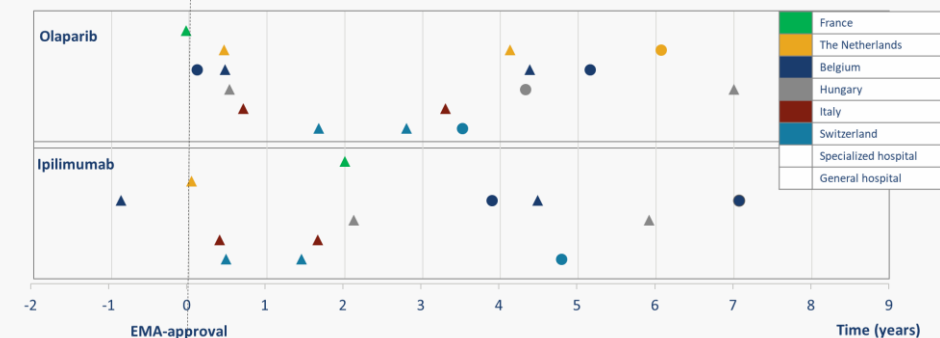
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