

**Recent geographic trends in global clinical
trials**
Is the position of CEE weakening?

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LongTaal CT Informatics
Founder & Owner



Our Voice | Our Community | Your Success



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Partner & Founder LongTaal, Partner & Co-Founder VIARES; Board Member at SanaClis



- > 30 yrs in biomedical R&D:
 - Researcher at National Cancer Institute NIH, Bethesda, Maryland
 - >17 years Quintiles (IQVIA): VP and Head of Global operations center, Global clinical leadership team member, VP for CEE and MENA
- Current roles:
 - Partner and Founder of LongTaal (www.longtaal.com) a clinical trial informatics company
 - Partner and Co-founder of VIARES Academy (www.viares.at), Vienna academy for clinical research
 - Board Member at SanaClis (www.sanaclis.eu), full service European CRO; (CEO during 2018-19)
- > 60 research articles and book chapters in peer-reviewed journals – current research focus: various aspects of globalization of industry clinical trials
- Editorial board member at *Applied Clinical Research, Clinical Trials and Regulatory Affairs*

Faculty Disclosure

In compliance with ACCME Guidelines, I hereby declare:

I have financial/other relationships with the manufacturer(s) of commercial product(s) or provider(s) of commercial service(s) discussed in this educational activity.

Shareholder/LongTaal sro

Vladimir Misik, PhD



LongTaal

Powering advanced clinical trial data analytics

www.longtaal.com

Clinical trial informatics platform

Combining large data sets from multiple data sources offers pharmaceutical companies, CROs, medical institutions, regulators and other government authorities, policy makers, patient advocacy groups, investors, as well as media, unique perspectives into the world of industry R&D clinical trials

- Anatomy of global industry clinical trials
- Patient accessibility to CTs
- Assessing reputation of countries/regions among sponsors of CTs
- Global CT market share trends 2008-2019
 - Is CEE losing its edge or the inevitable is happening?

Data sources

- [ClinicalTrials.gov](https://clinicaltrials.gov); [EU Clinical Trials Register](https://clinicaltrialsregister.eu)
 - Extracted: September 2019
 - Inclusion criteria:
 - Industry sponsored
 - Interventional studies
 - Phase 2 & 3 trials
 - Recruitment: Active, not recruiting; Completed; Enrolling by invitation; Not yet recruiting; Recruiting
- **Global GDP & Population data:** World Bank

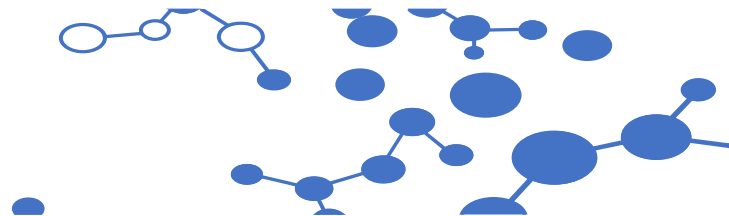
Active sites methodology

To determine whether sites in a study were active in a given calendar year the start and completion date associated with the study record in clinicaltrials.gov were used. Based on our analysis, less than 3% of studies do not have a completion date entered in their record. For these, the study completion date was replaced with either study last update date or start date plus five years, whichever is less. Number of active sites in a country represents the sum of all site locations for all active studies in that country.

Definitions

- **BPCT: Biopharmaceutical-sponsored clinical trial**
- **Relative Market Growth:** Year-on-Year % change in Active sites market share
- **Accessibility to CTs:** Number of active sites per 1 million population. Expressed relative to US levels (US being 100%)
- **Country CT Reputation Index:** Participation of countries/regions in development of new pharmaceutical products (ie participation in industry-sponsored clinical trials) relative to the consumption of marketed pharmaceutical products

Anatomy of global industry CTs





Clinical Trials Landscape

This report shows global Clinical Trials Landscape. Data comes from Clinicaltrials.gov and EU CT Register. Data contains Industry sponsored trials only. Suspended, terminated or withdrawn trials are excluded.

Data Refreshed On: Sep 16, 2019

Select Region

Select Parent Sponsor

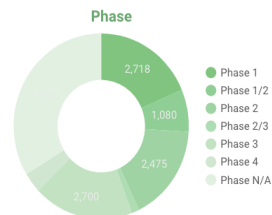
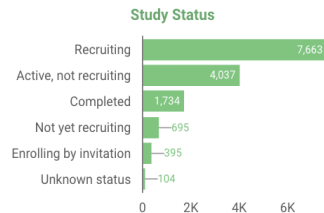
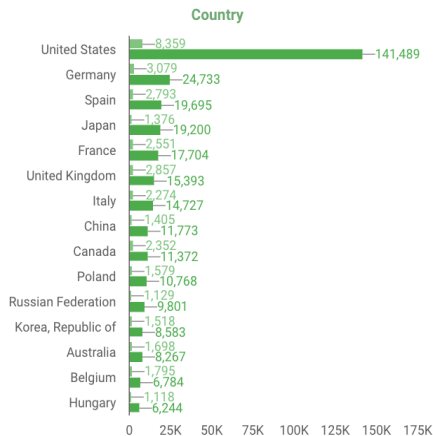
Select Sub-region

Type in MESH Condition (Cas...

Select Country

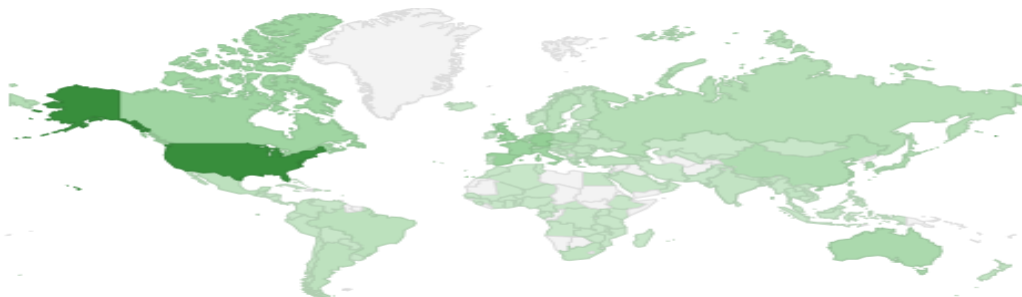
Type in MESH Intervention (C...

Active Studies & Sites in 2019



Geography

Condition (MESH)	Active Studies	Active Sites
Carcinoma, Non-Small-Cel...	478	18.5K
Breast Neoplasms	350	17.8K
Neoplasms	265	6K
Solid Tumors	260	2.7K
Lymphoma	250	5.8K
Diabetes Mellitus, Type 2	241	12.4K
Multiple Myeloma	234	8.3K
Melanoma	222	6.1K
Heart Failure	192	7.7K
Arthritis, Rheumatoid	177	7.6K



Global view

Phase 2 and 3, Industry sponsored CTs

CEE view



Clinical Trials Landscape

This report shows global Clinical Trials Landscape. Data comes from Clinicaltrials.gov and EU CT Register. Data contains Industry sponsored trials only. Suspended, terminated or withdrawn trials are excluded.

Data Refreshed On: Nov 2, 2019

Select Region: ▼

Select Parent Sponsor: ▼

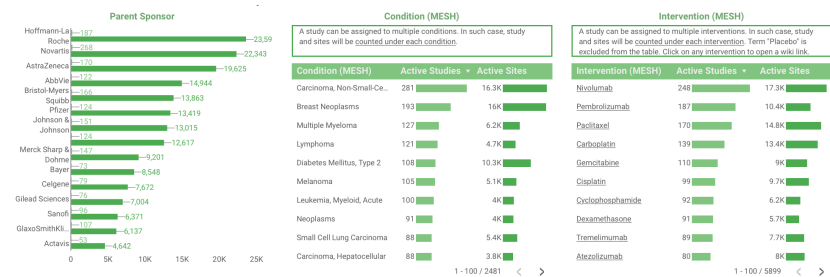
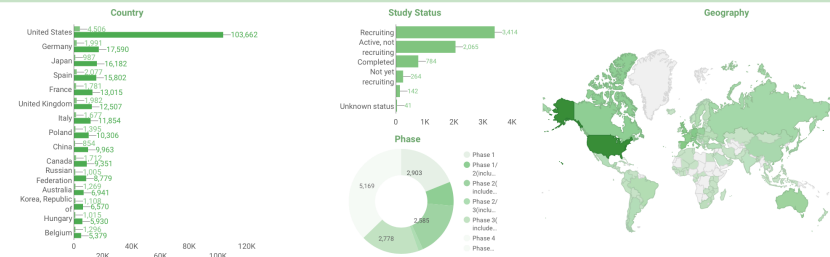
Select Sub-region: ▼

Type in MESH Condition (C...): ▼

Select Country: ▼

Type in MESH Intervention (...): ▼

Active Studies & Sites in 2019



Clinical Trials Landscape

This report shows global Clinical Trials Landscape. Data comes from Clinicaltrials.gov and EU CT Register. Data contains Industry sponsored trials only. Suspended, terminated or withdrawn trials are excluded.

Data Refreshed On: Nov 2, 2019

Select Region: Eastern Europe (1) ▼

Select Parent Sponsor: ▼

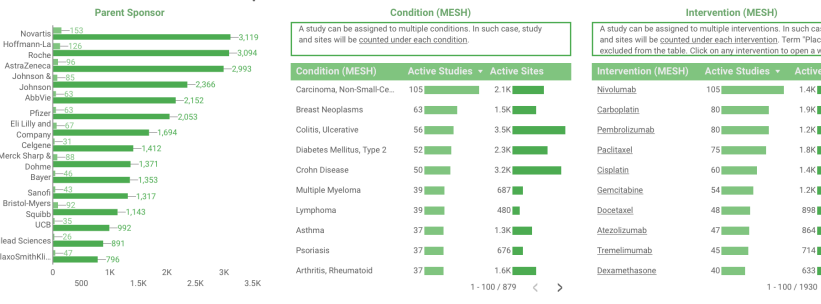
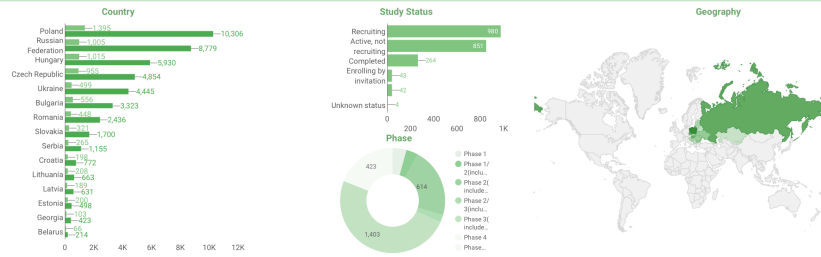
Select Sub-region: ▼

Type in MESH Condition (C...): ▼

Select Country: ▼

Type in MESH Intervention (...): ▼

Active Studies & Sites in 2019



Global Industry Ph 2 and Ph 3: Country inclusion and representation



Rank	Global Ph2				Rank	Global Ph3					
	location	Active Studie	Active Sites	Sites/ study	Country inclusion in % of Ph2		location	Active Studie	Active Sites	Sites/ study	Country inclusion in % of Ph3
1	United States	1711	26379	15	66%	1	United States	2089	71477	34	69%
2	Spain	622	3772	6	24%	2	Germany	1254	13523	11	42%
3	Germany	601	3623	6	23%	3	Japan	704	13452	19	23%
4	United Kingdom	601	2963	5	23%	4	Spain	1272	11210	9	42%
5	France	516	2837	5	20%	5	France	1089	9525	9	36%
6	Japan	237	2508	11	9%	6	United Kingdom	1205	9044	8	40%
7	Italy	453	2391	5	17%	7	Italy	1095	9026	8	36%
8	Poland	358	2108	6	14%	8	China	551	8440	15	18%
9	Canada	511	2068	4	20%	9	Poland	1009	8159	8	33%
10	Australia	328	1393	4	13%	10	Russian Federation	795	7409	9	26%
11	Russian Federation	210	1362	6	8%	11	Canada	1088	7078	7	36%
12	Belgium	359	1260	4	14%	12	Australia	841	5320	6	28%
13	China	211	1240	6	8%	13	Korea	759	5149	7	25%
14	Korea	244	1102	5	9%	14	Hungary	760	4820	6	25%
15	Hungary	235	1075	5	9%	15	Brazil	512	4232	8	17%
16	Czech Republic	219	872	4	8%	16	Czech Republic	714	3918	5	24%
17	Netherlands	303	807	3	12%	17	Belgium	858	3903	5	28%
18	Ukraine	102	753	7	4%	18	Ukraine	392	3663	9	13%
19	Israel	180	701	4	7%	19	Argentina	486	3420	7	16%
20	Taiwan	174	633	4	7%	20	Netherlands	659	3374	5	22%
21	Bulgaria	117	601	5	4%	23	Bulgaria	427	2702	6	14%
30	Romania	78	298	4	3%	28	Romania	367	2124	6	12%
32	Slovakia	51	193	4	2%	33	Slovakia	272	1502	6	9%
36	Serbia	46	161	4	2%	36	Serbia	215	973	5	7%
45	Latvia	29	89	3	1%	42	Croatia	177	723	4	6%
50	Georgia	22	64	3	1%	45	Lithuania	186	622	3	6%
						47	Latvia	159	537	3	5%
	Top 50		66 456				Top 50		243 793		
	All Phase 2	2 605	67 013	26			All Phase 3	3 021	250 872	83	
	Top 50 %		99%				Top 50 %		97%		
	Avg sites/country ex US			4			Avg sites/country ex US			7	

Inclusion & allocation of CEE among industry sponsors of CTs

Phase 2 and 3, Industry sponsored CTs



Phase 2 and 3					CEE 2019							
Global rank	Parent Sponsor	Active Studies	Active Sites	Sites/study	Regional rank	Parent Sponsor	Active Studies	Active Sites	CEE as % global studies	CEE as % of global sites	Sites/study	CEE % sites/study
1	Hoffmann-La Roche	187	23591	126	1	Novartis	153	3119	57%	14%	20	16%
2	Novartis	268	22343	83	2	Hoffmann-La Roche	126	3094	67%	13%	25	29%
3	AstraZeneca	170	19625	115	3	AstraZeneca	96	2993	56%	15%	31	27%
4	AbbVie	122	14944	122	4	Johnson & Johnson	85	2366	56%	18%	28	23%
5	Bristol-Myers Squibb	166	13863	84	5	AbbVie	63	2152	52%	14%	34	41%
6	Pfizer	124	13419	108	6	Pfizer	63	2053	51%	15%	33	30%
7	Johnson & Johnson	151	13015	86	7	Eli Lilly and Company	67	1694	54%	13%	25	29%
8	Eli Lilly and Company	124	12617	102	8	Celgene	31	1412	39%	18%	46	45%
9	Merck Sharp & Dohme	147	9201	63	9	Merck Sharp & Dohme	88	1371	60%	15%	16	25%
10	Bayer	73	8548	117	10	Bayer	46	1353	63%	16%	29	25%
11	Celgene	79	7672	97	11	Sanofi	43	1317	45%	21%	31	32%
12	Gilead Sciences	76	7004	92	12	Bristol-Myers Squibb	92	1143	55%	8%	12	13%
13	Sanofi	96	6371	66	13	UCB	35	992	74%	28%	28	43%
14	GlaxoSmithKline	107	6137	57	14	Gilead Sciences	26	891	34%	13%	34	60%
15	Actavis	53	4642	88	15	GlaxoSmithKline	47	796	44%	13%	17	19%
16	Amgen	59	4545	77	16	Amgen	37	759	63%	17%	21	27%
17	Takeda	73	4430	61	17	Novo Nordisk AS	35	752	76%	17%	21	35%
18	Novo Nordisk AS	46	4394	96	18	Shire	12	625	38%	24%	52	55%
19	Boehringer Ingelheim	55	4365	79	19	Takeda	30	581	41%	13%	19	24%
20	UCB	47	3503	75	20	Actavis	21	565	22%	9%	27	36%
Top 20		2223	204229	92	Top 20		1196	30028	54%	15%	25	27%

Source: LongTaal CT dashboard, Data refreshed on Nov 2, 2019

Indication comparison Global vs CEE, Phase 2 and Phase 3

CEE relatively over-represented in non-oncology indications and in Phase 3



Global Phase 2

Condition (MESH)	Active Studies	Active Sites
Carcinoma, Non-Small-Ce...	92	3K
Breast Neoplasms	67	2.7K
Alzheimer Disease	42	1.4K
Multiple Myeloma	42	1.2K
Lymphoma	41	995
Colitis, Ulcerative	35	1.9K
Neoplasms	34	1K
Melanoma	34	977
Dermatitis	33	1.2K
Carcinoma, Hepatocellular	31	515

CEE Phase 2

Condition (MESH)	Active Studies	Active Sites
Carcinoma, Non-Small-Ce...	27	202
Colitis, Ulcerative	21	620
Crohn Disease	18	605
Breast Neoplasms	13	156
Lymphoma	13	66
Arthritis, Rheumatoid	11	343
Leukemia, Myeloid, Acute	10	61
Lupus Erythematosus, Dis...	10	251
Asthma	10	207

Global Phase 3

Condition (MESH)	Active Studies	Active Sites
Carcinoma, Non-Small-Ce...	108	11.9K
Diabetes Mellitus, Type 2	80	9.7K
Breast Neoplasms	72	12.4K
Psoriasis	55	3.7K
Asthma	49	5.7K
HIV Infections	48	3.2K
Colitis, Ulcerative	40	10.9K
Crohn Disease	39	10.7K
Dermatitis	38	3.8K
Multiple Myeloma	38	4.4K

CEE Phase 3

Condition (MESH)	Active Studies	Active Sites
Carcinoma, Non-Small-Ce...	70	1.8K
Diabetes Mellitus, Type 2	47	2.2K
Breast Neoplasms	45	1.3K
Colitis, Ulcerative	35	2.8K
Crohn Disease	32	2.6K
Psoriasis	30	588
Multiple Sclerosis	28	1.1K
Asthma	27	1.1K
Arthritis, Rheumatoid	26	1.2K
Multiple Myeloma	26	584

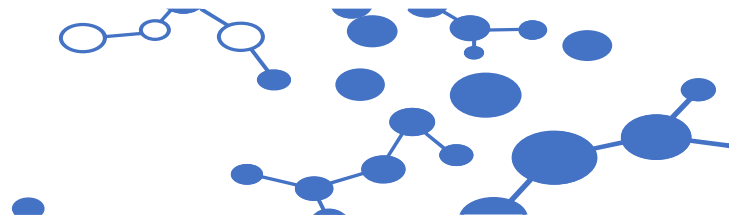
Share of oncology in Phase 3 and Phase 3 industry CTs globally and CEE

CEE relatively over-represented in non-oncology indications and in Phase 3



Phase 2 Global					Phase 2 CEE				
Studies	Sites	S/S	% sites oncol		Studies	Sites	S/S	% sites oncol	
Top 50 Oncology	709	20610	29	53%	Top 50 Oncology	173	1515	9	28%
Top 20 Oncology	495	14682	30	68%	Top 20 Oncology	107	937	9	26%
Top 10 Oncology	340	10628	31	70%	Top 10 Oncology	74	589	8	22%
Total	2 605	67 013	26		Total	620	7 801	13	
					CEE as % global	24%	12%		
Phase 3 Global					Phase 3 CEE				
Studies	Sites	S/S	% sites		Studies	Sites	S/S	% sites	
Top 50 Oncology	531	62486	118	40%	Top 50 Oncology	341	7694	23	29%
Top 20 Oncology	364	44520	122	41%	Top 20 Oncology	260	6200	24	32%
Top 10 Oncology	180	24233	135	31%	Top 10 Oncology	140	3716	27	24%
Total	3 021	250 872	83		Total	1 482	38 428	26	
					CEE as % global	49%	15%		

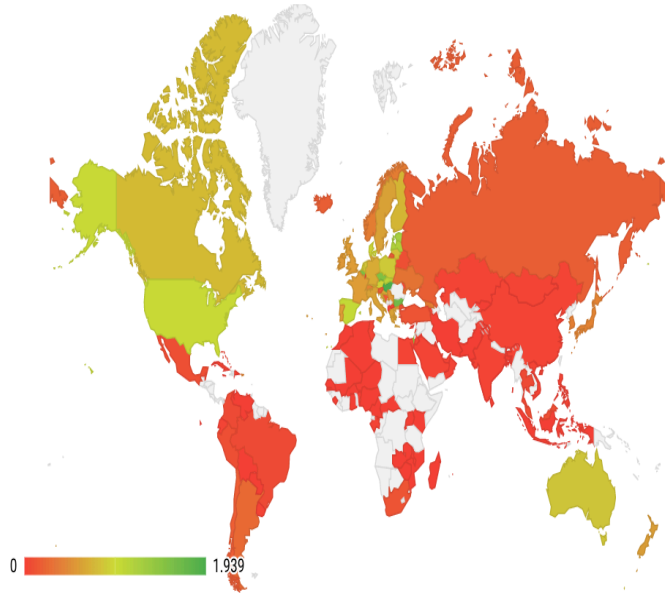
Industry clinical trial demographics



Patient accessibility to experimental therapies

Industry CT Ph II-III sites per capita relative to the US levels (US = 100%)

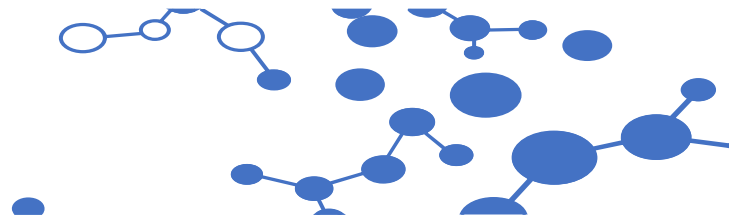
Accessibility to CTs in 2018 by Geography



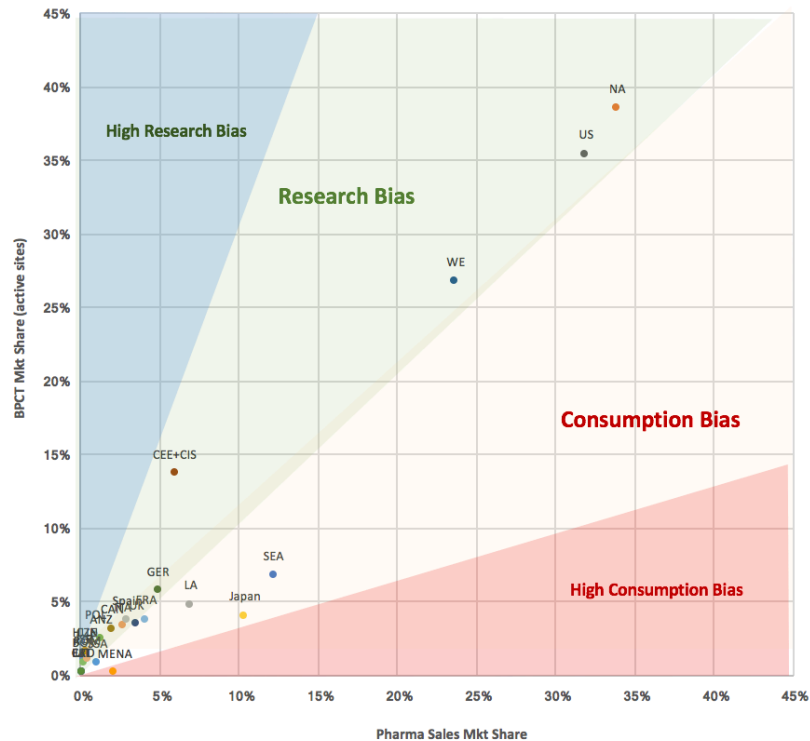
Accessibility to CTs in 2018

Country	Accessibility to CTs
Hungary	193.88%
Bulgaria	165.01%
Belgium	156.34%
Czech Republic	153.12%
Israel	131.16%
Estonia	125.49%
Latvia	117.18%
Slovakia	107.09%
Spain	101.08%
United States	100.00%
Denmark	93.41%
Austria	93.37%
Poland	87.05%
Australia	83.71%
Canada	78.17%
Finland	74.41%
Germany	66.37%
Croatia	65.88%
Italy	61.57%
Greece	60.31%
Sweden	59.63%
New Zealand	59.24%
France	58.38%
Portugal	57.50%
United Kingdom	57.03%

Reputation index of countries/regions



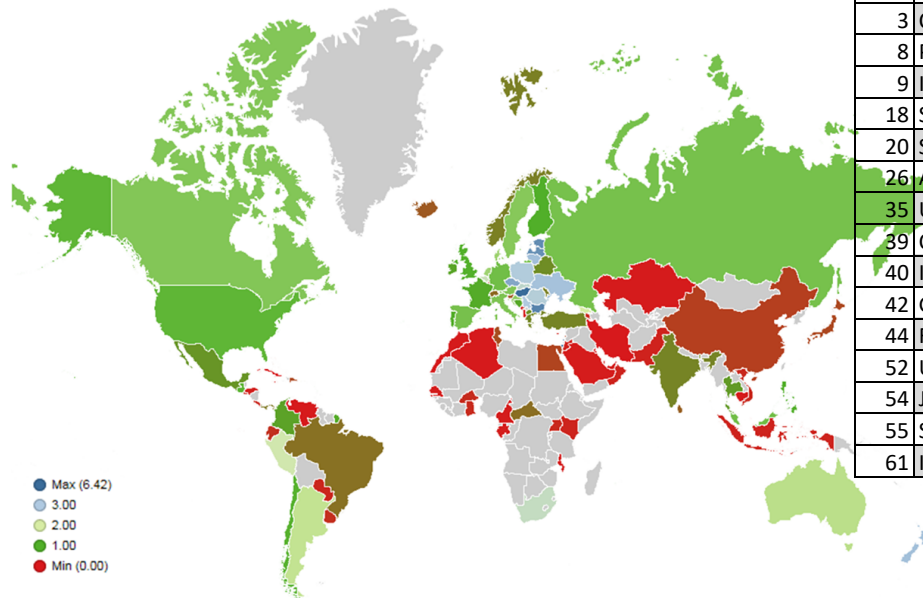
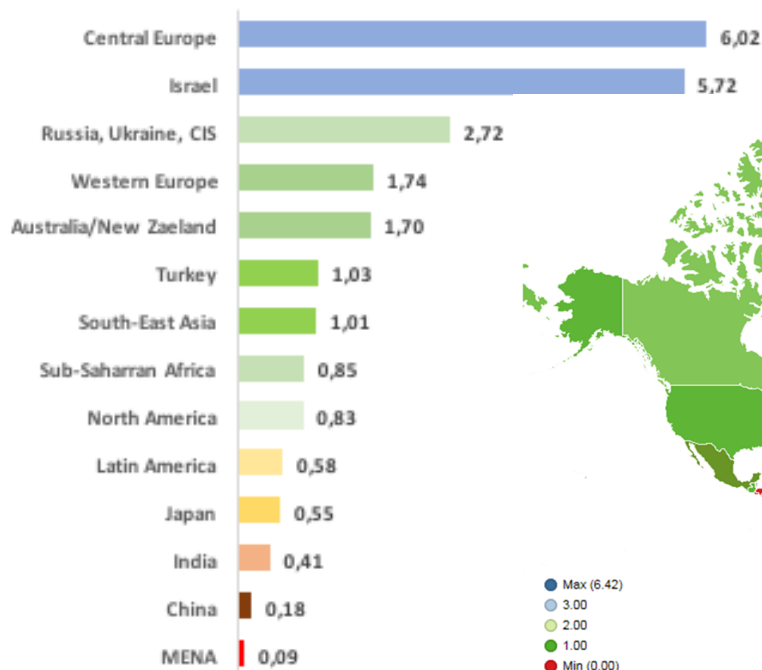
Participation in CTs vs Participation in Consumption of Pharmaceuticals



Sources:
(1) IFPMA Facts and Figures 2015
(2) Clinicaltrials.gov database. Extracted April 2016

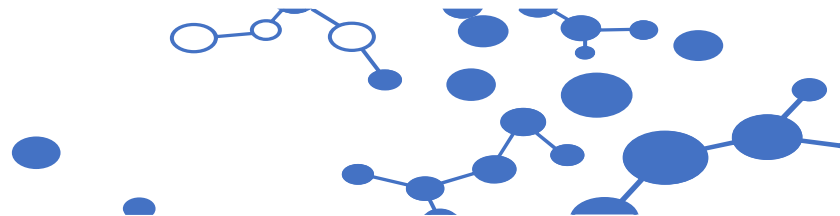
Geographic Industry CT reputation index

Regional CT Reputation Index



Rank	Country	Index 2018
1	Bulgaria	8,5
2	Hungary	7,9
3	Czech Republic	7,8
8	Poland	4,9
9	Israel	4,8
18	Spain	2,3
20	South Africa	2,3
26	Australia	2,0
35	United Kingdom	1,6
39	Canada	1,5
40	Italy	1,4
42	Germany	1,3
44	France	1,3
52	United States	0,8
54	Japan	0,7
55	Switzerland	0,6
61	India	0,5

*All that looks good – BUT:
CEE is trending in the right direction?*



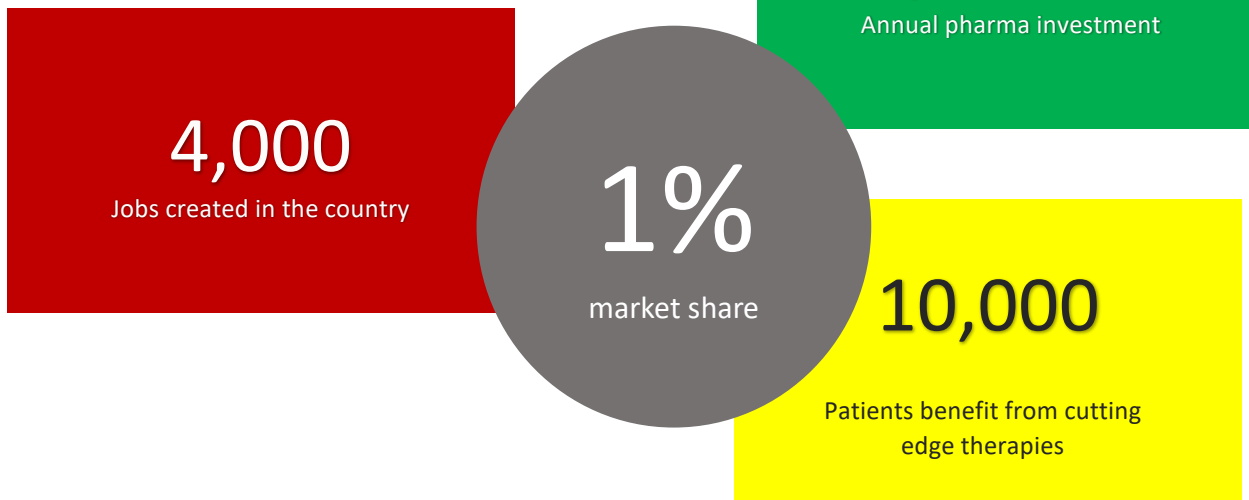
CEE still a leader among emerging markets BUT shows signs of weakening



Industry sponsored Phase 2 and 3 CTs; % active sites 2008 - 2019

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Australia/New Zealand	1,9%	2,0%	2,1%	2,1%	2,1%	2,2%	2,2%	2,2%	2,2%	2,2%	2,3%	2,4%
Japan	2,6%	3,0%	3,3%	3,5%	3,9%	3,9%	3,9%	4,2%	4,7%	5,1%	5,1%	4,9%
Israel	0,8%	0,8%	0,9%	0,9%	0,9%	0,9%	1,0%	1,0%	1,1%	1,1%	1,1%	1,2%
North America	40,4%	38,3%	36,5%	36,3%	36,1%	35,3%	34,1%	33,8%	34,1%	33,9%	34,4%	34,3%
Canada	3,58%	3,33%	3,29%	3,16%	3,00%	2,96%	2,86%	2,82%	2,74%	2,78%	2,80%	2,85%
USA	36,8%	35,0%	33,2%	33,2%	33,1%	32,3%	31,2%	30,9%	31,3%	31,1%	31,6%	31,5%
Western Europe	31,5%	31,7%	31,2%	30,3%	29,9%	30,1%	30,4%	30,2%	29,8%	29,0%	28,3%	28,8%
Developed Markets	77,2%	75,9%	74,0%	73,3%	72,9%	72,4%	71,6%	71,5%	71,8%	71,4%	71,2%	71,7%
Asia	4,9%	5,4%	6,1%	6,2%	6,3%	6,5%	6,6%	6,7%	6,6%	7,2%	7,7%	8,0%
China	0,9%	1,1%	1,3%	1,5%	1,7%	1,9%	2,0%	2,1%	2,0%	2,4%	2,7%	3,0%
India	1,5%	1,7%	1,7%	1,5%	1,3%	1,1%	0,9%	0,8%	0,7%	0,8%	0,8%	0,7%
South-East Asia	2,4%	2,7%	3,1%	3,2%	3,3%	3,4%	3,7%	3,8%	3,8%	4,0%	4,2%	4,2%
Central & Eastern Europe	12,1%	12,7%	13,5%	14,1%	14,6%	15,1%	15,7%	15,8%	15,6%	15,3%	14,8%	14,1%
Central Europe	8,8%	9,2%	9,8%	10,3%	10,6%	10,9%	11,4%	11,5%	11,3%	10,8%	10,4%	9,9%
Russia + CIS	3,3%	3,6%	3,7%	3,9%	4,0%	4,2%	4,3%	4,3%	4,3%	4,4%	4,4%	4,2%
Latin America	4,4%	4,5%	4,8%	4,8%	4,7%	4,5%	4,5%	4,5%	4,4%	4,5%	4,6%	4,6%
MEA	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,6%	1,6%	1,6%	1,6%	1,7%	1,7%
Emerging Markets	22,8%	24,1%	26,0%	26,7%	27,1%	27,6%	28,4%	28,5%	28,2%	28,6%	28,8%	28,3%

Why does CT market share matter?



Sources:

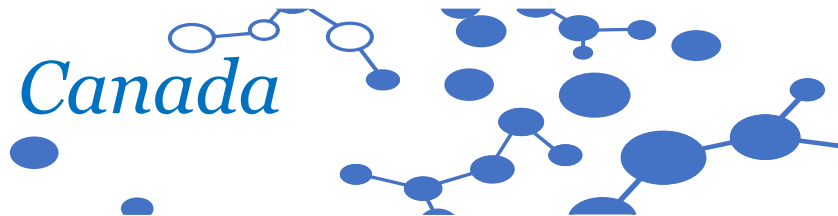
- S. Valiquette, J. Yong; UBS Global research: U.S. Healthcare Distribution - CROs; CRO Investor Playbook for 2H15 (www.ubs.com/investmentresearch), 12 August 2015, pp. 1-15
- Sahoo A. The CRO market outlook to 2016: Emerging markets, leading players, and future trends. SCRIP Business Insights 2011, Nov; Ref code B100046-006
- Barclays Capital, Healthcare Distribution & Technology, 9 Nov 2009
- European Commission, ENRT/FSF D(2009) 32674

• International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) The Pharmaceutical Industry and Global Health: Facts and Figures 2015 Geneva: ISBN 978-3-910-498-47-5 (www.ifpma.org)

• S. Valiquette, J. Yong; UBS Global research: U.S. Healthcare Distribution - CROs; CRO Investor Playbook for 2H15 (www.ubs.com/investmentresearch), 12 August 2015, pp. 1-15

Between 2007 and 2011 Canada lost approx. 0.5% share of global CT market – as a result the annual CT revenues have shrunk by approx. 20%

What can be done? – example Canada



Clinical trials – national priority in Canada

Canadian Clinical Trial Summit
Starting the Conversation

Canada's Research-Based
Pharmaceutical Companies
R&D
Les compagnies de recherche
pharmaceutique du Canada

CIHR IRSC
Canadian Institutes of Health Research
Institut de recherche
en santé Canada

A C A H O
A C I S U

Cameron Institute



An Action Plan to Help Attract More
Clinical Trials to Canada

To Your Health & Prosperity...

Canada's Research-Based
Pharmaceutical Companies

R&D

Les compagnies de recherche
pharmaceutique du Canada

CIHR IRSC
Canadian Institutes of Health Research
Institut de recherche
en santé Canada

A C A H O
A C I S U



Final Draft
March 30, 2012

November 2012



**CANADA'S CLINICAL
TRIAL INFRASTRUCTURE:**

A Prescription for Improved Access to New Medicines

Standing Senate Committee on Social Affairs,
Science and Technology

The Honourable Kelvin K. Ogilvie, *Chair*

The Honourable Art Eggleton, P.C., *Deputy Chair*



Developed markets including Canada managed to halt and even partially reverse outflow of industry CTs to Emerging markets



Industry sponsored Phase 2 and 3 CTs; % active sites 2013 - 2019

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Australia/New Zealand	1,9%	2,0%	2,1%	2,1%	2,1%	2,2%	2,2%	2,2%	2,2%	2,2%	2,3%	2,4%
Japan	2,6%	3,0%	3,3%	3,5%	3,9%	3,9%	3,9%	4,2%	4,7%	5,1%	5,1%	4,9%
Israel	0,8%	0,8%	0,9%	0,9%	0,9%	0,9%	1,0%	1,0%	1,1%	1,1%	1,1%	1,2%
North America	40,4%	38,3%	36,5%	36,3%	36,1%	35,3%	34,1%	33,8%	34,1%	33,9%	34,4%	34,3%
Canada	3,58%	3,33%	3,29%	3,16%	3,00%	2,96%	2,86%	2,82%	2,74%	2,78%	2,80%	2,85%
USA	36,8%	35,0%	33,2%	33,2%	33,1%	32,3%	31,2%	30,9%	31,3%	31,1%	31,6%	31,5%
Western Europe	31,5%	31,7%	31,2%	30,3%	29,9%	30,1%	30,4%	30,2%	29,8%	29,0%	28,3%	28,8%
Developed Markets	77,2%	75,9%	74,0%	73,3%	72,9%	72,4%	71,6%	71,5%	71,8%	71,4%	71,2%	71,7%
Asia	4,9%	5,4%	6,1%	6,2%	6,3%	6,5%	6,6%	6,7%	6,6%	7,2%	7,7%	8,0%
China	0,9%	1,1%	1,3%	1,5%	1,7%	1,9%	2,0%	2,1%	2,0%	2,4%	2,7%	3,0%
India	1,5%	1,7%	1,7%	1,5%	1,3%	1,1%	0,9%	0,8%	0,7%	0,8%	0,8%	0,7%
South-East Asia	2,4%	2,7%	3,1%	3,2%	3,3%	3,4%	3,7%	3,8%	3,8%	4,0%	4,2%	4,2%
Central & Eastern Europe	12,1%	12,7%	13,5%	14,1%	14,6%	15,1%	15,7%	15,8%	15,6%	15,3%	14,8%	14,1%
Central Europe	8,8%	9,2%	9,8%	10,3%	10,6%	10,9%	11,4%	11,5%	11,3%	10,8%	10,4%	9,9%
Russia + CIS	3,3%	3,6%	3,7%	3,9%	4,0%	4,2%	4,3%	4,3%	4,3%	4,4%	4,4%	4,2%
Latin America	4,4%	4,5%	4,8%	4,8%	4,7%	4,5%	4,5%	4,5%	4,4%	4,5%	4,6%	4,6%
MEA	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,6%	1,6%	1,6%	1,6%	1,7%	1,7%
Emerging Markets	22,8%	24,1%	26,0%	26,7%	27,1%	27,6%	28,4%	28,5%	28,2%	28,6%	28,8%	28,3%

Source: LongJal Informatics portal, accessed on Sept 19, 2019

- Large-scale market share outflow to developing markets halted ...*or paused* (?)
 - 70% of industry R&D CTs conducted in developed markets
- CEE remains a leader among emerging regions with 14.1% mkt share, with highest patient accessibility to CTs globally and highest CT reputation index
- BUT there are signs of market share erosion: between 2015 and 2019 CEE lost more than 1.5% of global mkt share:
 - minus 6,000 jobs
 - minus \$450m of pharma R&D investment annually
 - 15,000 fewer patients receiving cutting edge therapies
- In order to retain market share countries in CEE have to look for ways of making themselves more attractive, otherwise mkt share loss is likely to continue

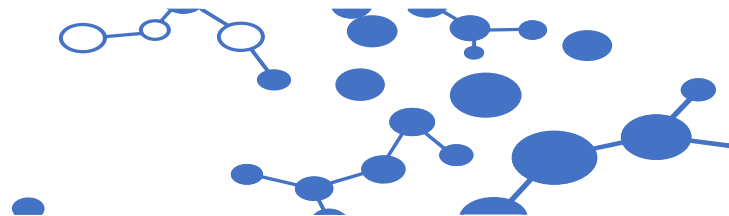
Supplementary reading material:

Mišík V, Brady RV, Boleček M, Klech H:

Recent trends in globalization of industry R&D clinical trials: are emerging markets losing their allure?

Applied Clinical Research Clinical Trials and Regulatory Affairs, June 2017. Vol 4, pp. 175 - 182

THANK YOU



For more information please visit
www.longtaal.com