100

90

80

70

60

50

40

30

20

10

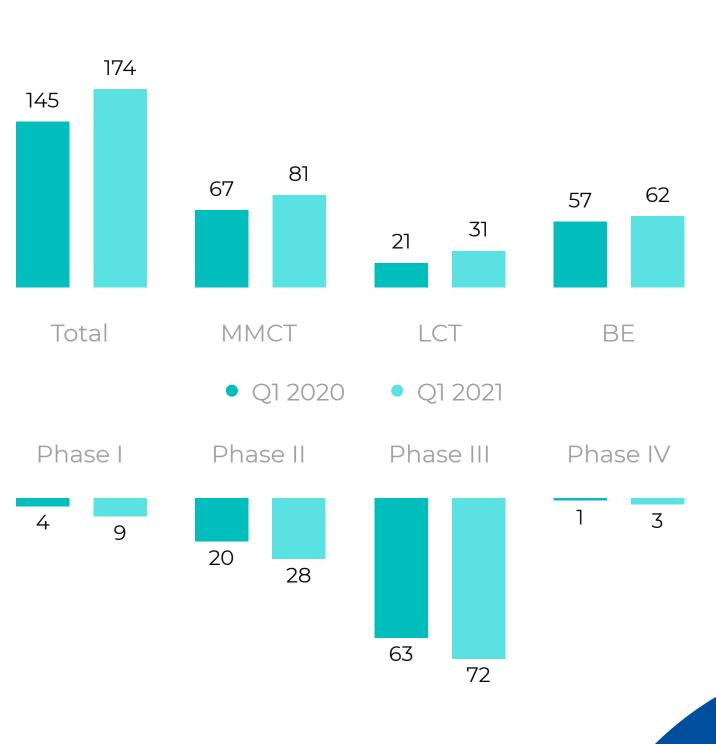
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O Trial Data

During Q1 2021 the Ministry of Health of the Russian Federation approved the start of 174 new clinical trials of all types, including local and bioequivalence studies. This represents a 20% year on year growth by the total number of studies.

The dominant type of clinical trials conducted across Russian sites in Q1 2021 were MMCT (Multinational Multi-center Clinical Trials). The market share of MMCTs remains almost the same as in the previous year with 47% of the total number of trials. The market share of Local Clinical Trials (LCTs) increased from 14% to 18%, whilst the Bio-equivalent (BE') share slightly dipped from 39% to 36%.

Breakdown of Clinical Trials by Type and Phase



The most prevalent Phase of clinical trials conducted in Russian sites by total number of studies was Phase III. The total number of Phase III trials increased by 14% – from 63 trials in Q1 2020 to 72 trials in Q1 2021.

Percentage Breakdown of Clinical Trials by Type

18%

47%

Q1 2021

BE

39%

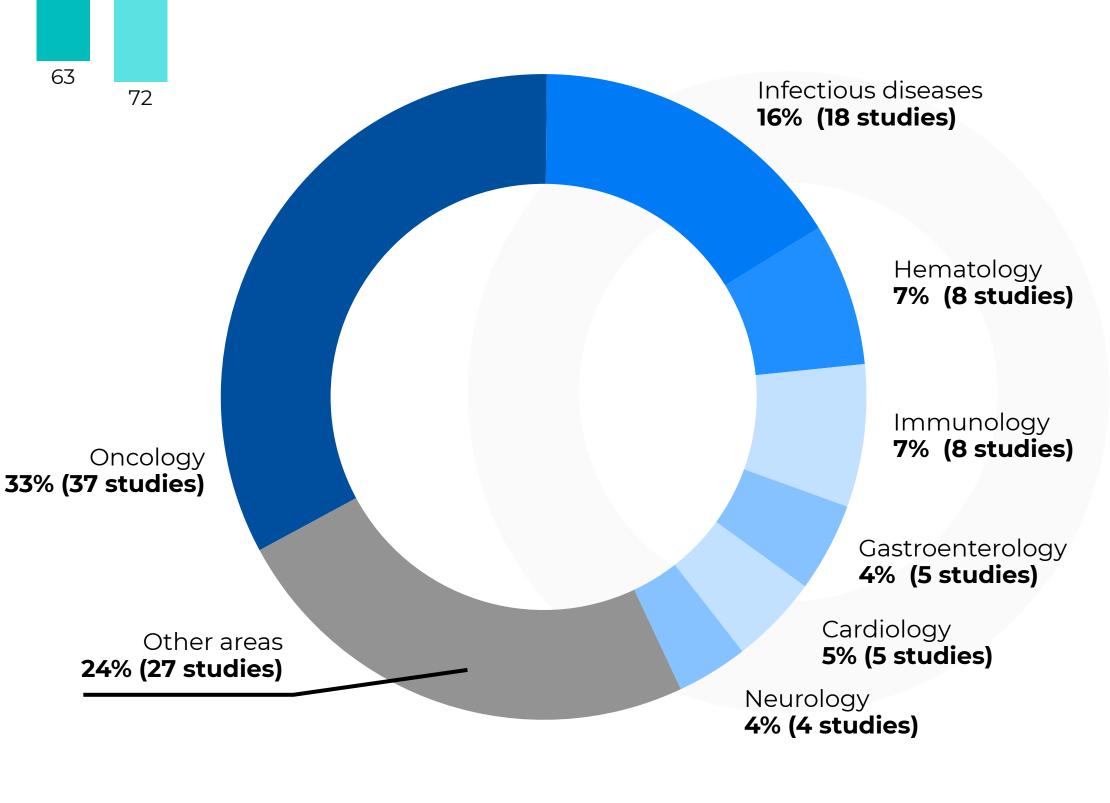
14%

46%

Q1 2020

MMCT

The largest number of clinical trials initiated in Russia during Q1 2021 were related to Oncology (37 studies), Infectious diseases (18 studies), Hematology (8 studies) and Immunology (8 studies). Other dominant therapy areas include Gastroenterology, Cardiology and Neurology.



Sponsor Data

Breakdown of Clinical

by Therapeutic Area

may be assigned to a trial.

any therapeutic area group.

Trials in Russia in Q1 2021

More than one therapeutic area

BE studies were not included in

Clinical trials initiated in Russia during Q1 2021 were sponsored by pharmaceutical companies from Russia and 19 foreign countries. The combined market share of international pharmaceutical companies involved in the Russian Clinical trials market declined from 64% to 57% of all studies.

Russian sites by international pharmaceutical companies in Q1 2021 was Phase III with 49% share among Phase I – IV studies.

The dominant Phase of Clinical trials conducted across

The most prevalent Sponsor's countries of origin in Q1 2021 were Russia (74 studies), U.S. (22 studies) and Switzerland (20 studies). Other prominent countries include Belgium (9 studies), Sweden (9 studies) and France (7 studies).

(from I to IV) were not counted in the following ranking.

Observational trials and trials without FDA-defined phases

Percentage Breakdown of Clinical Trials by Sponsor's Country of origin 100 90 80 57% 70 64% 60 50 40 30 43% 20 36% 10 0 Q1 2020 Q1 2021 Russian Sponsors International Sponsors

international and Russian sponsors.

Combined market share shown as a percentage of both

Top-10 International Trial Sponsors in Russia in Q1 2021

Nº	Company Name	Studies	Subjects	
1	Hoffman-la Roche	9	663	
2	AstraZeneca	7	660	
3	Janssen	5	752	
4	Merck	5	535	
5	Sanofi	4	310	
6	Novartis	4	196	
7	Argenx	4	120	
8	Novo Nordisk	3	342	
9	Bayer	3	159	
10	GlaxoSmithKline	3	79	
	Combined market share	42 %	20%	
* Gamaleya Research Institute of Epidemiology				

and Microbiology

The overall number of subjects enrolled (or planned to be reached a total of 19,501 subjects – a 113% jump in

Top-10 Russian Trial Sponsors in Russia in Q1 2021

	Nº	Company Name	Studies	Subjects
	1	Gamaleya Research Institute*	3	6 686
	2	St. Petersburg Institute of the FMBA of Russia**	2	1 093
	3	Valenta Pharm	2	430
	4	Mabscale	1	600
	5	BIOCAD	1	480
	6	Materia Medica Holding	1	400
	7	PharmaVAM	1	350
	8	NovaMedica	1	348
	9	RCV Therapeutics	1	304
	10	Obnovlenie	1	274
		Combined market share	13%	56%
** The Saint Petersburg Scientific Research Institute of				

Vaccines and Serums of the FMBA of Russia

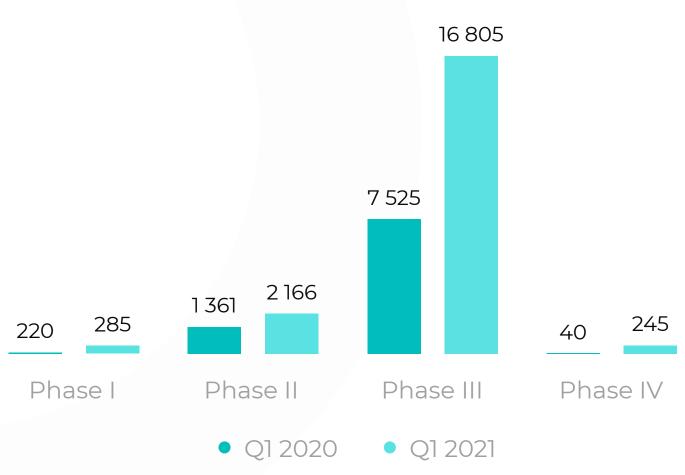
Subject Data

enrolled) in clinical trials initiated in Russia during Q1 2021 comparison with the previous year when only 9,146 subjects were enrolled. The most prevalent Phase of clinical trials by the number of participating subjects was Phase III with 86%

of all subjects enrolled. Studies indicated by sponsors as Phase I-II were counted as

Phase II; Phase II-III – as Phase III, Phase III-IV – as Phase IV.

Breakdown of number of Subjects enrolled by Phase 16 805



Q1 2021 Research report

O Research Site Data

Top-5 Russian research sites (all studies) in Q1 2021

No	Site Name	City	No. Studies
1	Clinical Hospital #2	Yaroslavl	14
2	I.P. Pavlov First Saint Petersburg State Medical University	Saint Petersburg	13
3	I.M. Sechenov First Moscow State Medical University	Moscow	12
4	N.N. Blokhin Russian Cancer Research Center	Moscow	11
5	Probiotec Medical Center	Moscow Region	9

Combined market share of these sites

Nº

Site Name

34%

No. Subjects

No. Studies

OCRO Data

in Q1 2021 (Phase I - IV studie	:S

Top-10 CROs in Russia

Observational Clinical trials and Clinical trials without FDA defined phases (from I to IV) were not included in this ranking.

	1	IQVIA	5	649
	2	Parexel	5	285
	3	Medpace	4	163
	4	Pharmaceutical Research Associates CIS	4	157
	5	Covance	3	343
	6	PSI	3	237
	7	PPD	3	104
	8	ClinPharmDevelopment	1	350
	9	Medici Farma Group	1	348
	10	Expert-Legal Center	1	314
		Combined market share	27 %	15%
			No. Studies	No. Subjects
			2	120
enc	У		2	76
			2	7/

Top-5 CROs in Russia in Q1 2021 (BE studies)		7	PPD	3	104	
		8	ClinPharmDevelopment	1	350	
		9	Medici Farma Group	1	348	
	Only BE	E (bioequivalence) studies	10	Expert-Legal Center	1	314
\vee	were in	cluded in this ranking.		Combined market share	27 %	15%
Nº Site Name				No. Studies	No. Subjects	
	1	ARS PharmRussia			2	120
		Medical Development Agend	cy		2	76
		Probiotec Medical Center			2	74
	4	R&D Pharma			1	120
5 X7 Clinical Research		X7 Clinical Research			1	56
Combined market share of		these c	ompanies	13%	14%	

During Q1 2021 the Center for Drug Evaluation and Research (CDER) of the U.S. FDA approved 26 new drugs,

O Regulatory Data

including 12 new molecular entity (NME); other approvals concerned new dosages, combinations or manufacturers. Appr.Date Drug (Active Ingredient)

Source: FDA

in clinical trials involving Russian sites.

Company

Twelve of these 26 drugs were tested (or being studied)

19.01.2021	Verquvonda (Vericiguat)	Merck
21.01.2021	Vocabrianda (Cabotegravir Sodium)	ViiV Healthcare
21.01.2021	Cabenuva (Cabotegravir; Rilpivirine)	ViiV Healthcare
22.01.2021	Lupkynisnda (Voclosporin)	Aurinia
03.02.2021	Tepmetkonda (Tepotinib Hydrochloride)	Merck Serono
11.02.2021	Evkeezabla (Evinacumab)	Regeneron Pharmaceuticals
25.02.2021	Amondys (Casimersen)	Sarepta Therapeutics
10.03.2021	Fotivdanda (Tivozanib Hydrochloride)	Aveo Pharms
12.03.2021	Kimyrsanda (Oritavancin Diphosphate)	Melinta Therapeutics
18.03.2021	Ponvorynda (Ponesimod)	Janssen
23.03.2021	Roszetnda (Rosuvastatin Calcium; Ezetimibe)	Althera Life Sciences
25.03.2021	Myrbetriqnda (Mirabegron)	Astellas Pharma
In Q1 2021 the Cor	mmittee for Medicinal Products for Twe	enty-one of these drugs were tested (or being studied)

Appr.Date Drug (Active Ingredient) Seffalair Spiromax (Salmeterol Xinafoate; 28.01.2021 Fluticasone Pronionatel

Human Use (CHMP) of the European Medicine Agency

(EMA) approved 37 new drugs including 2 generics, 4

biosimilar and 7 orphan medicines.

Company

in clinical trials involving Russian sites.

Teva

Source: EMA

20.0 11.2021	Fluticasone Propionate)				
28.01.2021	Sirturo (Bedaquiline Fumarate)	Janssen			
28.01.2021	Vazkepa (Icosapent Ethyl)	Amarin Pharmaceuticals			
28.01.2021	Kesimpta (Ofatumumab)	Novartis			
28.01.2021	Sogroya (Somapacitan)	Novo Nordisk			
28.01.2021	Nexpovio (Selinexor)	Karyopharm			
28.01.2021	Alymsys (Bevacizumab)	Mabxience			
28.01.2021	BroPair Spiromax (Salmeterol Xinafoate; Fluticasone Propionate)	Teva			
28.01.2021	Tysabri (Natalizumab)	Biogen			
25.02.2021	Abevmy (Bevacizumab)	Mylan			
25.02.2021	Evrysdi (Risdiplam)	Hoffmann-La Roche			
25.02.2021	Lextemy (Bevacizumab)	Mylan			
25.02.2021	Sarclisa (Isatuximab)	Sanofi			
25.02.2021	Opdivo (Nivolumab)	Bristol-Myers Squibb			
25.03.2021	Xtandi (Enzalutamide)	Astellas Pharma			
25.03.2021	Tecentriq (Atezolizumab)	Hoffmann-La Roche			
25.03.2021	Copiktra (Duvelisib)	Verastem			
25.03.2021	Ponvory (Ponesimod)	Janssen			
25.03.2021	Lydisilka (Estetrol Monohydrate; Drospirenc	one) Estetra			
25.03.2021	Saxenda (Liraglutide)	Novo Nordisk			
25.03.2021	Benlysta (Belimumab)	GlaxoSmithKline			
FDA inspections		Roszdravnadzor inspections			
According to the l	J.S. FDA data, there were no FDA	According to the Roszdravnadzor quarterly report, as of			
	rata di la la Divissiona incressionativa dita	01/0//2021 the area value to De avalete main area estimate			

inspections conducted in a Russian investigative site during Q1 2021.

Canada since 2002.

About The Orange Paper

01/04/2021 there were no Regulatory inspections conducted by Roszdravnadzor during Q1 2021.

01/04/2021

The Orange Paper is a free publication produced by

Synergy Research Group for the pharmaceutical industry since 2007. It pulls together data from numerous public sources into a single brief document to aid decision makers planning to conduct clinical trials.

close of each year.

All of the data within this document are actual on date:

It is produced quarterly, with an annual summary at the

We set up the highest level of world-class quality both

for SOPs and for final study data in every clinical trial

About Synergy Research Group Synergy Research Group is a contract research organization successfully operating in Russia, Kazakhstan, Ukraine and

The high recruitment rates of the emerging markets

combined with innovative technology allows Synergy to

offer our clients conduct faster, more cost-effective studies

we conduct. Synergy consistently ranks in the top-10 market leaders by number of conducted clinical studies and enrolled patients.

We are continuously improving our SOPs, study risk management and IT infrastructure - and replacing outdated R&D strategies by novel, more efficient

approaches to clinical research.



without sacrificing quality for our clients.