

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. List of Investigators

Country	Site Name	Principal Investigator	No. of Patients Randomized
Russian Federation (n = 367)	BIH at Omsk Region "Clinical Oncology Dispensary", Omsk	Anastasia Zimina	43
	Private Healthcare Institution Clinical Hospital RZhD Medicine, St. Petersburg	Aleksandr Vasiliev	41
	Regional Clinical Oncology Hospital, Prospect Oktyabrya 67, Yaroslavl	Nikolay Kislov	26
	FBI "Scientific Research Institute of Oncology n. a. N. N. Petrov", Saint Petersburg	Petr Krivorotko	22
	Arkhangelsk Regional Clinical Oncology Dispensary, Arkhangelsk	Lyudmila Lebedeva	20
	Moscow Clinical Scientific Center, Moscow	Lyudmila Zhukova	19
	Regional Oncology Hospital, Irkutsk	Dmitry Ponomarenko	19
	Multidisciplinary Clinic Reaviz, Samara	Mikhail Kopp	18
	Regional Clinical Hospital, Saratov	Svetlana Averyanova	18
	Oncologica Dispensary #2, Sochi	Dmitry Kirtbaya	17
	P.A. Herzen Oncological Institute, Moscow	Larisa Bolotina	16
	Mordovia State University, Saransk	Pavel Skopin	16
	Ivanovo Regional Oncology Dispensary, Ivanovo	Evgeniy Gotovkin	13
	FSBI Russian Oncology Research Center n.a. Blokhin of MOH RF, Moscow	Elena Artamonova	13
	S-Pb Clinical Scientific Practical Center of Specialized Kinds of Medical Care (Oncological), Saint Petersburg	Vladimir Moiseenko	11
	National Medical Research Center for Oncology, Rostov	Lyubov Vladimirova	10
	SHI Volgograd Regional Clinical Oncological Dispensary#1, Volgograd	Nadezhda Kovalenko	7
	Regional Oncology Dispensary, Veliky Novgorod	Boris Frumkin	7
	Evimed, Chelyabinsk	Oleg Gladkov	6
	Nizhny Novgorod Regional Clinical Oncology Center, Nizhniy Novgorod	Irina Shumskaya	6
	Medsi Clinic, 6th km Pyatnitskoye Shosse, Moscow	Anastasia Mochalova	5
	LCC Center of Palliative Medicine - Devita, Saint Petersburg	Svetlana Uvarova	4
	Pyatigorsky Oncologic Dispensary, Stavropol	Vladimir Vladimirov	3
	Bashkirian Republican Clinical Oncology Dispensary, Ufa	Alsu Iskhakova	3
	EosMed LLC, Pesochniy, Saint Petersburg	Mikhail Kramchaninov	2
	LLC Strategic Medical Systems, Saint Petersburg	Sergey Orlov	1
	Samara Regional Oncology Dispensary, Samara	Yulia Makarycheva	1
	Ukraine (n = 288)	Lviv State Oncological Regional Treatment and Diagnostic Center, Lviv	Yaroslav Shparyk
Volyn Regional Oncology Dispensary, Lutsk		Ivan Sinielnikov	43
Vinnitsya Regional Clinical Oncology Dispensary, Vinnitsya		Iryna Matsishevskaya	36
Municipal Institution Odesa Regional Oncology Dispensary, Odesa		Yuliia Krasnohrud	33
Regional Oncology Center, Chernigiv		Sergey Polenkov	29
ME Kryviy Rih Oncology Dispensary of Dnipropetrovs'k Regional Council, Kryvyi Rih		Hryhoriy Adamchuk	27
City Clinical Hospital #4, Dnipropetrovsk		Igor Bondarenko	24
Transcarpathian Regional Oncology Clinic, Uzhgorod		Andriy Rusyn	11
CCCH City Oncological Center SHEI Uzhgorod NU, Uzhgorod		Yevhen Hotko	10

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Country	Site Name	Principal Investigator	No. of Patients Randomized
	MI "Clinical Oncological Dispensary" of Dnipro Reg Council, Dnipro	Natalia Zvonarova	8
	Municipal Institution Odesa Regional Clinical Hospital, Odesa	Oleksandr Berzoy	7
	Chernivtsi Regional Clinical Oncology Dispensary, Chernivtsi	Anna Pidverbetska	6
	Sumy Reg. Clin. Oncological Dispensary, Sumy Region	Andriy Kurochkin	4
	Zaporizhzhia Regional Clinical Oncology Dispensary, Zaporizhzhia	Olexiy Kovalyov	3
	Yulis Medical and Diagnostic Center, Zaporizhzhia	Olexiy Kovalyov	1
	Municipal Institution Kirovograd Regional Oncology Dispensary, Kirovograd	Andrij Gardashnikov	1
China (n = 268)	Fudan University Shanghai Cancer Center, Shanghai	Zhimin Shao	62
	Henan Cancer Hospital, Zhengzhou	Zhenzhen Liu	29
	Harbin Medical University Cancer Hospital, Harbin	Qingyuan Zhang	23
	The First Affiliated Hospital of College of Medicine, Hangzhou	Peng Shen	15
	Fujian Medical University Union Hospital, Fuzhou	Chuan Wang	13
	West China Hospital, Sichuan University, Chengdu	Ting Luo	12
	Beijing Union Hospital, Beijing	Qiang Sun	11
	The Second Affiliated Hospital of Zhejiang University College, Hangzhou	Yongchuan Deng	9
	The First Hospital of Jilin University, Changchun	Zhimin Fan	9
	Beijing Hospital; Internal Medicine-Oncology, Beijing	Yongqiang Zhang	9
	Hebei Medical University Fourth Hospital, Shijiazhuang	Cuizhi Geng	8
	Jilin Cancer Hospital, Changchun	Ying Cheng	7
	Nanjing Drum Tower Hospital, the Affiliated Hospital of Nanjing University Medical School, Nanjing	Wenjing Hu	7
	Wuhan Union Hospital Tongji Medical College, Wuhan City	Jing Cheng	7
	Sun Yat-Sen University Cancer Center, Guangzhou	Shusen Wang	6
	Shandong Cancer Hospital, Jinan	Yongsheng Wang	5
	Peking University People's Hospital, Beijing	Shu Wang	5
	Shanghai Jiao Tong University School of Medicine (SJTUSM) - Ruijin Hospital (GuangCi Hospital), Shanghai	Kunwei Shen	4
	Zhejiang Cancer Hospital, Hangzhou City	Hongjian Yang	4
	Luoyang Central Hospital, Luoyang City	Mingli Ni	4
	The University of Hong Kong-Shenzhen Hospital, Shenzhen City	Zhiyuan Xu	4
	The First Affiliated Hospital of Xian Jiao Tong University, Xi'an City	Jin Yang	3
	The 900th Hospital of PLA Joint Service Support Force, Fuzhou	Xi Chen	3
	Zhongshan Hospital Fudan University, Shanghai City	Hongwei Zhang	3
	Chongqing Cancer Hospital, Chongqing City	Xiaohua Zeng	3
	Guangdong General Hospital, Guangzhou	Ning Liao	2
Hubei Cancer Hospital, Wuhan	Xinhong Wu	1	
Japan (n = 249)	Kanagawa Cancer Center, Kanagawa	Toshinari Yamashita	34
	Osaka International Cancer Institute, Osaka	Takahiro Nakayama	25
	Chiba Cancer Center, Chiba	Rikiya Nakamura	20
	Saitama Cancer Center, Saitama	Kenichi Inoue	18
	The Cancer Institute Hospital of JFCR, Tokyo	Toshimi Takano	15
	Saitama Medical University International Medical Center, Saitama	Hiroshi Ishiguro	13
	Aichi Cancer Center Hospital, Alchi	Hiroji Iwata	10
	Hyogo Medical University Hospital, Hyogo	Yasuo Miyoshi	10
	Tokai University Hospital, Kanagawa	Naoki Niikura	10

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Country	Site Name	Principal Investigator	No. of Patients Randomized
	Naha-nishi Clinic, Okinawa	Yoshihiko Kamada	10
	Sagara Hospital, Kagoshima	Tetsuhiko Taira	10
	National Hospital Organization Kyushu Cancer Center, Fukuoka-shi	Eriko Tokunaga	10
	Kyoto University Hospital, Kyoto	Kosuke Kawaguchi	10
	Shikoku Cancer Center, Ehime	Daisuke Takabatake	10
	Shizuoka Cancer Center, Shizuoka	Tomomi Hayashi	9
	University of Tsukuba Hospital, Ibaraki	Hiroko Bando	6
	National Hospital Organization Osaka National Hospital, Osaka	Hiroyuki Yasojima	6
	National Hospital Organization Hokkaido Cancer Center, Hokkaido	Nobumoto Tomioka	6
	Hiroshima City Hiroshima Citizens Hospital, Hiroshima	Mitsuya Itoh	6
	Fukushima Medical University Hospital, Fukushima	Shigehira Saji	5
	St. Luke's International Hospital, Tokyo	Atsushi Yoshida	4
	Okayama University Hospital, Okayama	Tsuguo Iwatani	2
Republic of Korea (n = 158)	Soon Chun Hyang University Cheonan Hospital	Han Jo Kim	21
	Asan Medical Center, Seoul	Sung-Bae Kim	14
	Gachon University Gil Medical Center, Incheon	Hee Kyung Ahn	14
	Samsung Medical Center, Seoul	Ji-Yeon Kim	13
	Seoul National University Hospital, Seoul	Seock Ah Im	12
	Seoul National University Bundang Hospital, Seongnam-si	Jee Hyun Kim	10
	Ajou University Hospital, Suwon	Seok Yun Kang	10
	Seoul St Mary's Hospital, Seoul	Ji Eun Lee	10
	Severance Hospital, Seoul	Joo Hyuk Sohn	9
	Chungbuk National University Hospital, Cheongju-si	Ki Hyeong Lee	9
	National Cancer Center, Kyunggi-Do	Keun Seok Lee	8
	Ulsan University Hospital, Ulsan	Su Jin Koh	8
	Ewha Womans University Mokdong Hospital, Seoul	Kyoung Eun Lee	7
	CHA Bundang Medical Center, Seongnam-si	Yong Wha Moon	4
	Gangnam Severance Hospital, Seoul	Jee Hung Kim	4
	Inha University Hospital, Incheon	Moon Hee Lee	4
	Wonju Christian Hospital, Seoul	Seung Taek Lim	1
	France (n = 143)	Clinique Tivoli; Sce Radiotherapie, Bordeaux	Nathalie Bonichon Lamichhane
CRLCC-Francois Baclesse, Caen		Christelle Levy	12
Centre Georges Francois Leclerc, Dijon		Sylvain Ladoire	11
Clinique Clémentville, Montpellier		Ivan Toledano	10
Institut du Cancer Coulangy Reims, Reims		Karinne Prulhiere	8
Centre Henri Becquerel, Rouen		Jean Christophe Thery	7
Hopital Prive Jean Mermoz, Lyon		Olfa Derbel	7
Hopital Prive Drome Ardeche, Valence		Louis Doublet	6
Centre Antoine Lacassagne, Nice		Jean-Marc Ferrero	5
l'Hôpital Privé du Confluent SAS, Nantes		Alain Lortholary	5
Institut Gustave Roussy, Villejuif		Barbara Pistilli	5
CH de Beauvais, Beauvais		Hanifa Ammarguellat	5
Institut Claudius Régaud, Toulouse		Florence Dalenc	4
Centre Hospitalier Regional Metz-Thionville - Hopital de Mercy, Vandoeuvre-Les-Nancy		Elisabeth Luporsi	4
Centre Hospitalier Departemental de Vendee, La Roche Sur Yon		Frank Priou	3
Clinique Chenieux, Limoges		Dominique Genet	3
Centre Hospitalier Bretagne Sud, Lorient		Regine Lamy	3
Institut de Cancérologie de Lorraine, Vandoeuvre-Les-Nancy		Vincent Massard	3
CH de Cholet, Cholet		Victor Simmet	3

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Country	Site Name	Principal Investigator	No. of Patients Randomized	
	Centre Hospitalier Fleyriat, Bourg en Bresse	Hubert Orfeuvre	2	
	Centre Paul Strauss, Strasbourg	Thierry Petit	2	
	Polyclinique Bordeaux Nord Aquitaine, Bordeaux	Nadine Dohollou	2	
	CHU Jean Minjot, Besancon	Loic Chaigneau	2	
	Institut Sainte Catherine, Avignon	Julien Grenier	2	
	Institut Jean Godinot, Reims	Christelle Jouannaud	2	
	Institut Régional du Cancer Montpellier, Montpellier	William Jacot	2	
	Chi De Cornouaille, Quimper	Delphine Mollon Grange	2	
	Hopitaux Du Lemman - Site Georges Pianta, Thonon Les Bains	Andreea Ciobanu	2	
	Institut De Cancerologie Lucien Neuwirth, St-Priest-En-Jarez	Pierre Fournel	1	
	CHRU De Brest - Hopital Morvan - Institut De Cancerologie Et D'Hematologie, Brest	Helene Simon	1	
	CH Anancy Genevois Site Anancy, Metz Tassy	Laetitia Stefani	1	
	Centre Hospitalier Alpes Lemman, Contamine Sur Arve	Mansour Rastkhah	1	
	Hôpital Saint Joseph, Marseille	Cyril Foa	1	
	CHU Tours - Hôpital Bretonneau, Tours	Marie-Agnes By	1	
	Centre Hospitalier de Compiègne, Compiègne	Riccardo Samaritani	1	
	Spain (n = 75)	Hospital Universitario Virgen de Arrixaca, Murcia	Jose Luis Alonso	12
		Hospital Universitario de Canarias, La Laguna	Josefina Cruz Jurado	8
		Complejo Hospitalario de Vigo, Hospital Álvaro Cunqueiro, Vigo	Isabel Lorenzo	6
Hospital Quirón Sagrado Corazón, Sevilla		Juan Carlos Quero	4	
Instituto Valenciano Oncología, Valencia		Angel Guerrero Zotano	3	
Hospital Universitari Germans Trias i Pujol, Barcelona		Beatriz Cirauqui Cirauqui	3	
Hospital Clinico Universitario de Valencia, Valencia		Begona Bermejo De Las Heras	3	
Hospital General De Catalunya; Barcelona		Xavier Gonzalez Farre	3	
Hospital Universitari Sant Joan de Reus, Tarragona		Cinta Albacar	3	
Hospital Universitario de Fuenlabrada, Madrid		Laura Rodriguez Lajusticia	3	
Centro Oncologico de Galicia COG, La Coruña		Manuel Ramos Vazquez	2	
Complejo Hospitalario Universitario de Santiago (CHUS), La Coruña		Rafael Lopez Lopez	2	
Hospital Universitario de Burgos, Burgos		Blanca Hernando Fernandez De Aranguiz	2	
Hospital General Universitario de Valencia, Valencia		Vega Iranzo Gonzalez Cruz	2	
Centro Integral Oncológico Clara Campal Ensayos Clínicos START, Madrid		Beatriz Rojas	2	
Consorci Hospitalari de Terrassa, Barcelona		Maria Marin Alcala	2	
Hospital Clinico Universitario Virgen de la Victoria, Malaga		Maria Emilia Dominguez	2	
Hospital Son Llatzer, Palma de Mallorca		Aida Bujosa Rodriguez	2	
Complejo Hospitalario de Jaen, Jaen		Pedro Sanchez Rovira	1	
Hospital Clinico Universitario Lozano Blesa, Zaragoza		Pilar Bueso Inglan	1	
Hospital San Pedro De Alcantara, Caceres	Santiago Gonzalez Santiago	1		

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Country	Site Name	Principal Investigator	No. of Patients Randomized
	Hospital Provincial Castellón, Castellón	Eduardo Martinez De Dueñas	1
	Hosp Univ Fundacion Alcorcon, Madrid	Clara Olier Garate	1
	Complejo Asistencial Universitario de Leon, Leon	Ana Lopez	1
	Hospital Universitario Ramón y Cajal, Madrid	Elena Lopez Miranda	1
	Hospital General Universitario Gregorio Marañón, Madrid	Miguel Martin	1
	Hospital Universitario Puerta de Hierro - Majadahonda, Madrid	Blanca Cantos	1
	Hospital de Jerez, Cadiz	Natalia Chavarria	1
	Hospital Infanta Sofia, Madrid	Maria Merino Salvador	1
Mexico (n = 74)	IEM-FUCAM, Mexico City	Flavia Morales-Vasques	18
	Centro Médico Zambrano Hellion, San Pedro Garza García	Servando Cardona Huerta	14
	Oncologico Potosino, Mariano Arista 965, San Luis Potosí	Jessica Reyes Contreras	14
	Centro Medico Dalinde, Mexico City	Ricardo Villalobos Valencia	10
	Dentro De Condominio San Francisco	Alejandro Juarez Ramiro	7
	Merida Investigacion Clinica, Mérida	Jaime Alejandro Tec Chan	5
	Instituto Nacional De Cancerologia, Mexico City	Paula Anel Cabrera Galeana	2
	Centro de Investigacion Clinica de Oaxaca, Oaxaca de Juárez	Yolanda Lizbeth Bautista Aragon	2
	Health Pharma Professional Research, Mexico City	Fabian Martinez	2
Italy (n = 73)	Istituto Europeo Di Oncologia, Milano	Marco Angelo Colleoni	16
	Azienda Ospedaliera di Perugia Ospedale S. Maria della Misericordia, Perugia	Anna Maria Mosconi	12
	Azienda Ospedaliero Universitaria San Martino, Genova	Alberto Ballestrero	5
	Nuovo Ospedale Di Prato, Prato	Laura Biganzoli	4
	Ospedale degli Infermi, Rimini	Lorenzo Gianni	4
	Policlinico San Mattea, Pavia	Paolo Pedrazzoli	4
	Istituto Clinico Humanitas, Rozzano	Armando Santoro	3
	Azienda Ospedaliero - Universitaria di Modena Policlinico, Modena	Luca Moscetti	3
	A.O. Universitaria S. Maria Della Misericordia Di Udine, Udine	Alessandro Minisini	3
	Asst Di Lecco, Lecco	Antonio Ardizzoia	3
	Azienda Ospedaliera SS. Antonio E. Biagio E. Cesare Arrigo di Alessandria, Alessandria	Maura Vincenti	3
	Azienda Ospedaliero Universitaria di Parma, Parma	Antonino Musolino	2
	Azienda Usl 7, Poggibonsi	Angelo Martignetti	2
	Azienda Ospedaliera Papa Giovanni XXIII, Bergamo	Carlo Alberto Tondini	1
	Policlinico Universitario Campus Biomedico Di Roma, Roma	Giuseppe Tonini	1
	Ospedale Degli Infermi – Faenza, Lugo	Stefano Tamberi	1
	U.O Medicina Oncologica Ospedale di Carpi, Carpi	Katia Cagossi	1
	Azienda Ospedaliero Universitaria Di Bologna - Policlinico S.Orsola Malpighi, Bologna	Claudio Zamagni	1
	Ospedale Santa Maria Annunziata, Bagno A Ripoli	Francesca Martella	1
	Ospedale Degli Infermi Di Biella, Biella	Elena Seles	1
	Ospedale Mater Salutis, Legnago	Anna Mercanti	1

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Country	Site Name	Principal Investigator	No. of Patients Randomized
	Fondazione Salvatore Maugeri, Pavia	Raffaella Palumbo	1
Taiwan (n = 70)	National Cheng Kung University Hospital, Tainan	Wei-Pang Chung	15
	National Taiwan University Hospital, Taipei	Chiun-Sheng Huang	14
	Taipei Veterans General Hospital, Taipei City	Ling-Ming Tseng	14
	Kaohsiung Medical University Hospital, Kaohsiung	Ming-Feng Hou	12
	Tri-Service General Hospital, Taipei	Jyh-Cherng Yu	5
	Chi Mei Medical Center Liou Ying Campus, Liouying District	Wen-Tsung Huang	4
	Chunghua Christian Hospital, Changhua	Hung-Wen Lai	3
	Chang Gung Medical Foundation Linkou Branch, Taipei	Shin-Cheh Chen	1
	E-Da Cancer Hospital, Kaohsiung	Kun-Ming Rau	1
	Mackay Memorial Hospital - Taipei Branch, Taipei	Yuan-Ching Chang	1
Brazil (n = 58)	Crio - Centro Regional Integrado De Oncologia, Floresta	Eduardo Henrique Silva	9
	Instituto Brasileiro De Controle Do Câncer – São Camilo Oncologia, Sao Paulo	Felipe Jose Cruz	8
	Hospital de Cancer de Barretos, Barretos	Cristiano Souza	8
	Clinica de Neoplasias Litoral, Itajai	Giuliano Borges	7
	Hospital Mae de Deus, Porto Alegre	Christina Oppermann	5
	Oncosite - Centro De Pesquisa Clinica Em Oncologia Ltda, Ijuí	Fabio Andre Franke	4
	Hospital Moinhos de Vento, Porto Alegre	Daniela Rosa	3
	Faculdade de Medicina do ABC - FMABC, Santo Andre	Daniel Cubero	3
	Instituto Do Câncer Do Estado de São Paulo Octávio Frias de Oliveira, São Paulo	Paola Pinto	3
	Instituto Nacional de Cancer – INCa, Rio de Janeiro	Jose Bines	2
	Hospital Jardim Amália, Volta Redonda	Heloisa Resende	2
	Nucleo de Oncologia da Bahia - NOB, Salvador	Luciana Landeiro	2
	Hospital das Clinicas - UFRGS, Porto Alegre	Pedro Emanuel Liedke	1
	Hospital Amaral Carvalho, Jau	Patricia Beato	1
	Thailand (n = 56)	Songklanagarind Hospital, Songkla	Patrapim Sunpaweravong
Ramathibodi Hospital; Medicine/Oncology, Bangkok		Thitiya (Sirisinha) Dejthevaporn	12
Srinagarind Hospital, Khon Kaen University, Khon Kaen		Ongart Somintara	10
Siriraj Hospital; Clinical Research Center, Bangkok		Suthinee Ithimakin	9
King Chulalongkorn Memorial Hospital, Bangkok		Napa Parinyanitikul	4
Rajavithi Hospital, Bangkok		Piyawan Tienchaianada	1
Lampang Cancer Hospital, Muang Lampang		Sirikul Sorrarittichingchai	1
Germany (n = 52)	Universitätsklinik Tübingen, Tübingen	Eva-Maria Grischke	9
	Onkodok GmbH, Gütersloh	Reinhard Depenbusch	6
	Universitätsmedizin Mainz, Klinik u. Poliklinik f. Geburtshilfe u. Frauenheilkunde, Mainz	Marcus Schmidt	5
	Onkozentrum Dres. Göhler, Dresden	Thomas Goehler	4
	Klinikum Worms, Worms	Matthias Koegel	4
	Marien-Hospital Witten, Witten	John Hackmann	3
	Johannes Wesling Klinikum Minden, Minden	Martin Griesshammer	3
	Johanniter Frauenklinik Stendal Germany, Stendal	Andrea Stefek	3
	Klinikum Ludwigsburg, Ludwigsburg	Claudia Hanle	3
	St. Vincenz-Elisabeth-Hospital; Katholisches Klinikum Mainz, Mainz	Arnd Honig	3

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Country	Site Name	Principal Investigator	No. of Patients Randomized
	Klinikum Memmingen, Memmingen	Felix Flock	2
	Klinikum der Universität München, München	Nadia Harbeck	1
	Ärztehaus am Bahnhofplatz; Praxis Uleer/Pourfard, Hildesheim	Christoph Uleer	1
	St. Johannes-Hospital, Dortmund	Georg Kunz	1
	Gynäkologie Kompetenzzentrum, Stralsund	Carsten Hielscher	1
	BAG Freiberg-Richter, Jacobasch, Dresden	Thomas Illmer	1
	St. Elisabeth-Krankenhaus, Köln	Susanne Brandner	1
	Albertinen-Krankenhaus Klinik f. Gynäkologie und Geburtshilfe, Hamburg	Ulrike Dorste	1
United States (n = 31)	Baptist - MD Anderson Cancer Center, Jacksonville, FL	Dayra Avila-Lima	6
	Cancer Center of Kansas, Wichita, KS	Shaker Dakhil	4
	Memorial Sloan Kettering Cancer Center, New York, NY	Tiffany Traina	4
	SCRI, Nashville, TN	Erika Hamilton	3
	Rochester General Hospital, Rochester, NY	Farhan Imran	3
	New Hampshire Hematology Oncology, Hooksett, NH	Douglas Weckstein	2
	University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD	Paula Rosenblatt	2
	Monter Cancer Center, Lake Success, NY	Ruby Sharma	2
	Des Moines Oncology Research Association, Des Moines, IA	Seema Harichand-Herd	2
	John Muir Health Clinical Research Center, Concord, CA	Gigi Chen	1
	Cedars-Sinai Medical Center, Los Angeles, CA	Monica Mita	1
	St. Mary's Medical Center, Huntington, WV	Arvinder Bir	1
Australia (n = 27)	Monash Medical Centre, East Bentleigh	Marion Harris	4
	Macquarie University Hospital, Westmead	Dhanusha Sabanathan	4
	Austin Hospital Olivia Newton John Cancer Centre, Heidelberg	Shane White	3
	Wesley Medical Centre, Auchenflower	Nicole Mccarthy	3
	Ashford Cancer Center Research, Kurralta Park	Kerry Cheong	3
	Royal Adelaide Hospital, Adelaide	Sudarshan Selva-Nayagam	2
	Sydney Adventist Hospital, Wahroonga	Joseph Rutovitz	2
	Princess Alexandra Hospital, Chermside	Kate Cuff	2
	Lismore Base Hospital, Lismore	Adam Boyce	1
	Mater Hospital, South Brisbane	Kathryn Middleton	1
	St Vincent's Hospital Sydney, Darlinghurst	Elgene Lim	1
	Maroondah Hospital, Ringwood East	Laura Pellegrini	1
Belgium (n = 26)	AZ Klina, Brasschaat	Didier Verhoeven	6
	UZ Leuven Gasthuisberg, Leuven	Benoit Beuselinck	4
	Institut Jules Bordet, Brussels	Michail Ignatiadis	4
	Vitaz, Sint Niklaas	Ines Deleu	3
	Clinique Sainte-Elisabeth, Namur	Stephanie Henry	3
	CHC MontLégia, Boulevard Patience et Beaujonc, Liege	Marie-Pascale Graas	3
	CHR de la Citadelle, Liège	Jean-Paul Salmon	2
	CHU Ambroise Paré, Mons	Vinciane Casert	1
Denmark (n = 22)	Sygehus Lillebælt, Vejle, Vejle	Else Mae	10
	Odense Universitetshospital, Onkologisk Afdeling, Odense	Jeanette Dupont Jensen	9
	Herlev Hospital; Afdeling for Kræftbehandling, Herlev	Dorte Lisbet Nielsen	3
Romania (n = 21)	Centrul de Oncologie Sfantul Nectarie, Craiova	Michael Schenker	15
	"Filantropia" Clinical Hospital, Bucharest	Dragos Median	5
	Institutul Oncologic Prof. Dr. Ion Chiricuta Cluj Napoca, Cluj-Napoca	Nicoleta Antone	1
	Clinica Universitaria Reina Fabiola, Cordoba	Santiago Bella	3

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Country	Site Name	Principal Investigator	No. of Patients Randomized
Argentina (n = 17)	Hospital Britanico de Buenos Aires, C.A.B.A.	Ernesto Korbenfeld	3
	Instituto de Oncología de Rosario, Rosario	Cristian Micheri	3
	Centro Oncologico Riojano Integral (CORI), La Rioja	Diego Kaen	3
	Centro de Investigacion Clinica - Clinica Viedma S.A., Viedma	Ruben Dario Kowalyszyn	2
	Centro Medico San Roque, Tucuman	Juan Jose Zarba	1
	Centro de Oncologia e Investigacion Buenos Aires - COIBA, Buenos Aires	Mirta Varela	1
	Fundación Ars Medica, Jujuy	Alejandro Salvatierra	1
Ireland (n = 17)	Beaumont Hospital; Cancer Clinical Trials Unit, Beaumont Hospital, Dublin	Patrick Morris	13
	Mater Misericordiae University Hospital, Dublin	Austin Duffy	4
Hong Kong (n = 14)	Queen Elizabeth Hospital Department of Clinical Oncology, Kowloon	Wang Kwong Ho	8
	Pamela Youde Nethersole Eastern Hospital, Hong Kong	Sung Inda Soong	3
	Queen Mary Hospital, Hong Kong	Joanne Wing Yan Chiu	3
Poland (n = 14)	Instytut MSF Sp. z o.o., Lodz	Ewa Kalinka	5
	Wojskowy Instytut Medyczny - Panstwowy Instytut Badawczy, Warszawa	Renata Duchnowska	4
	MedPolonia, Poznan	Rodryg Ramlau	3
	Wielkopolskie Centrum Onkologi, Poznan	Maria Litwiniuk	2
Israel (n = 12)	Hadassah Med Org Kiryat, Kiryat Hadassah	Beatrice Uziely	3
	Rabin MC; Davidof Center - Oncology Institute, Petach Tikva	Rinat Yerushalmi	3
	The Chaim Sheba Medical Center, Tel Hashomer	Einav Gal-Yam	2
	Meir Medical center, Pediatrics, Tel Hashomer	Iryna Kuchuk	2
	Shaare Zedek Medical Center, Jerusalem	Hadar Goldvaser	2
Czech Republic (n = 12)	Fakultni Poliklinika Vseobecne Fakultni Nemocnice, Praha 2	Martina Zimovjanova	7
	Nemocnice Horovice, NH Hospital a.s., Hořovice	Martin Smakal	4
	Krajska nemocnice T. Bati, a.s., Zlin	Marketa Pospiskova	1
United Kingdom (n = 11)	The Christie NHS Foundation Trust, Manchester	Anne Armstrong	3
	Calderdale and Huddersfield NHS Foundation Trust, Huddersfield	Jo Dent	3
	University Hospitals of North Midlands NHS Trust-Royal Stoke University Hospital, Stoke on Trent	Daljit Gahir	2
	Nottingham University Hospitals NHS Trust - City Hospital, Nottingham	Sarah Khan	1
	NHS Lothian - Western General Hospital, Edinburgh	Olga Oikonomidou	1
	Leeds Teaching Hospital NHS Trust, St James's Institute of Oncology, Leeds	Rohan Iype	1
Peru (n = 10)	Instituto Nacional de Enfermedades Neoplasicas, Lima	Carlos Castañeda	6
	Oncosalud Sac, Lima	Henry Gomez-Moreno	3
	Hospital Nacional Carlos Alberto Seguin Escobedo-Essalud, Arequipa	Hernan David Moron Escobar	1
Austria (n = 10)	Salzkammergut-Klinikum Voecklabruck, Vöcklabruck	Ferdinand Haslbauer	3
	Medical University Innsbruck, Innsbruck	Daniel Egle	3
	Klinikum Kreuzschwestern Wels, Wels	Sonja Heibl	2
	AKH - Medizinische Universität Wien, Wien	Rupert Bartsch	1
	Ordensklinikum Linz Barmherzige Schwestern, Linz	Renate Pusch	1
Switzerland (n = 8)	Brust-Zentrum Zürich, Zürich	Urs Breitenstein	6
	Hirslanden Medical Center - Tumorzentrum, Aarau	Andreas Jakob	1
	Centre Hospitalier Universitaire Vaudois - Lausanne, Lausanne	Khalil Zaman	1

eTable 1. List of Investigators			
Country	Site Name	Principal Investigator	No. of Patients Randomized
Hungary (n = 7)	National Institute of Oncology, Budapest	Gabor Rubovszky	4
	Pécsi Tudományegyetem, Pécs	Laszlo Csaba Mangel	2
	Borsod-Abaúj-Zemplén Megyei Központi Kórház és Egyetemi Oktatókórház, Miskolc	Gergely Dombovari	1
Turkey (n = 6)	Mersin Universitesi Tip Fakultesi Hastanesi, Mersin	Emel Sezer	2
	Uludag Universitesi - Saglik Uygulama ve Arastirma Merkezi, Bursa	Turkkan Evrensel	1
	Baskent Universitesi Adana Dr. Turgut Noyan Uygulama ve Arastirma Merkezi, Adana	Ozgur Ozyilkan	1
	Izmir Ekonomi Universitesi Medical Park Hastanesi, Izmir	Cagatay Arslan	1
	Medikal Park Samsun, Mimarsinan Mahallesi, Samsun	Dilek Erdem	1
Singapore (n = 3)	National University Hospital, Singapore	Soo Chin Lee	2
	National Cancer Centre, Singapore	Rebecca Dent	1

eTable 2. Primary End Point Sensitivity Analyses (ITT patients)

Sensitivity Analysis	Hazard Ratio (95% CI)	Log-rank p-value
For non-protocol therapy	No observations met criteria	
For stratification based on eCRF		
Stratified analysis	1.09 (0.83–1.45)	0.53
Unstratified analysis	1.12 (0.88–1.43)	0.34
For Ukraine crisis		
Stratified analysis	1.05 (0.82–1.35)	0.70
Unstratified analysis	1.07 (0.83–1.38)	0.60

Abbreviations: eCRF, electronic case report form.

eTable 3. Summary of Safety and Treatment Exposure in the Safety Population^a

Parameter	Atezolizumab + Chemotherapy (n = 1093)	Chemotherapy Alone (n = 1084)
Any AE	1090 (100)	1074 (99)
Treatment-related AE, any grade	1085 (99)	1069 (99)
Treatment-related grade 3/4 AE	593 (54)	477 (44)
Treatment-related serious AE	208 (19)	110 (10)
Treatment-related grade 5 AE	0	1 (<0.5)
AE leading to any treatment discontinuation	192 (18)	63 (6)
Atezolizumab	146 (13)	–
Epirubicin	30 (3)	12 (1)
Doxorubicin	15 (1)	18 (2)
Cyclophosphamide	44 (4)	30 (3)
Paclitaxel	58 (5)	35 (3)
Treatment duration, days, median (IQR)		
Atezolizumab	351 (286–358)	–
Epirubicin	43 (43–50)	43 (43–49)
Doxorubicin	43 (43–48)	43 (43–49)
Cyclophosphamide	43 (43–49)	43 (43–49)
Paclitaxel	78 (78–85)	78 (78–85)
Dose intensity, %, mean (SD)		
Atezolizumab	96 (12)	–
Epirubicin	99 (8)	100 (4)
Doxorubicin	99 (8)	99 (6)
Cyclophosphamide	99 (8)	100 (3)
Paclitaxel	99 (6)	99 (6)

Abbreviations: AE, adverse event; IQR, interquartile range; SD, standard deviation.

^aAll entries are No. (%) unless otherwise noted.

eTable 4. Details of Adverse Events with Fatal Outcome by Patient

Adverse Event	Onset Day	Treatment Phase	Attributed to Study Drug
Atezolizumab + Chemotherapy			
COVID-19	26	Induction	No
COVID-19 pneumonia	100	Induction	No
Myocardial ischemia	107	Induction	No
COVID-19 pneumonia	120	Induction	No
COVID-19	140	Induction	No
Death ^a	167	Maintenance	No
Death ^a	206	Induction	No
Myocardial ischemia	209	Maintenance	No
Death ^a	301	Maintenance	No
Chemotherapy Alone			
Pneumonia	99	Induction	Yes (paclitaxel)
Cerebrovascular accident	119	Induction	No
Acute cardiac failure	125	Induction	No
COVID-19	146	Induction	No
Mesenteric artery thrombosis	175	Maintenance	No
Septic shock	180	Induction	No

^a Unexplained death with no available information on the clinical course or laboratory parameters. An autopsy was not performed.

eTable 5. Immune-Mediated Adverse Events by Treatment Period in the Safety Population

Immune-Mediated AEs	Induction Period		Overall	
	Atezolizumab + Chemotherapy (n = 1093)	Chemotherapy Alone (n = 1084)	Atezolizumab + Chemotherapy (n = 1 093)	Chemotherapy Alone (n = 1084)
Rash	431 (39)	325 (30)	471 (43)	327 (30)
Hepatitis (diagnosis and laboratory abnormalities)	321 (29)	279 (26)	370 (34)	286 (26)
Hepatitis (laboratory abnormalities)	308 (28)	275 (25)	354 (32)	281 (26)
Hepatitis (diagnosis)	17 (2)	6 (1)	23 (2)	8 (1)
Hypothyroidism	101 (9)	9 (1)	205 (19)	10 (1)
Hyperthyroidism	31 (3)	3 (<0.5)	63 (6)	3 (<0.5)
Pneumonitis	27 (2)	16 (1)	54 (5)	19 (2)
Adrenal insufficiency	16 (1)	0	30 (3)	0
Diabetes mellitus	8 (1)	3 (<0.5)	11 (1)	3 (<0.5)
Colitis	7 (1)	1 (<0.5)	10 (1)	1 (<0.5)
Pancreatitis	6 (1)	4 (<0.5)	8 (1)	4 (<0.5)
Hypophysitis	11 (1)	0	15 (1)	0
Ocular inflammatory toxicity	5 (<0.5)	2 (<0.5)	7 (1)	3 (<0.5)
Pericardial disorder	3 (<0.5)	2 (<0.5)	7 (1)	2 (<0.5)
Vasculitis	5 (<0.5)	6 (1)	6 (1)	6 (1)
Myocarditis	0	0	6 (1)	0

eTable 5. Immune-Mediated Adverse Events by Treatment Period in the Safety Population

Immune-Mediated AEs	Induction Period		Overall	
	Atezolizumab + Chemotherapy (n = 1093)	Chemotherapy Alone (n = 1084)	Atezolizumab + Chemotherapy (n = 1 093)	Chemotherapy Alone (n = 1084)
Meningoencephalitis	4 (<0.5)	0	5 (<0.5)	0
Myositis	2 (<0.5)	0	4 (<0.5)	0
Nephritis	2 (<0.5)	0	3 (<0.5)	0
Severe cutaneous reaction	3 (<0.5)	1 (<0.5)	3 (<0.5)	1 (<0.5)
Autoimmune hemolytic anemia	0	1 (<0.5)	1 (<0.5)	1 (<0.5)

Abbreviation: AE, adverse event.

There were no cases of facial palsy, Guillain-Barré syndrome, hemophagocytic lymphohistiocytosis, myelitis, or myasthenia gravis in either treatment group.

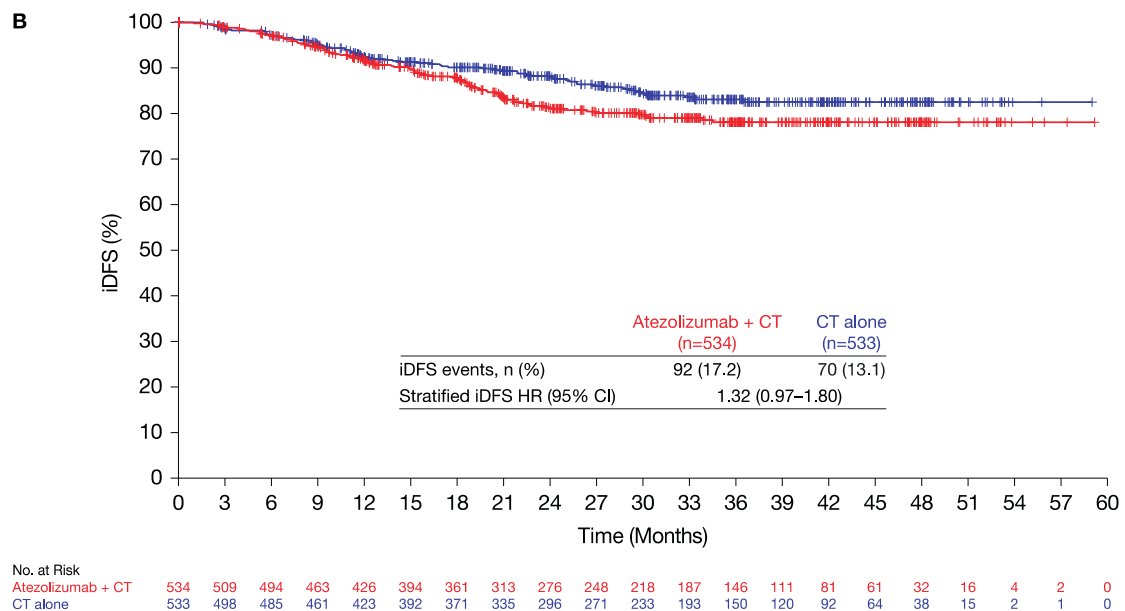
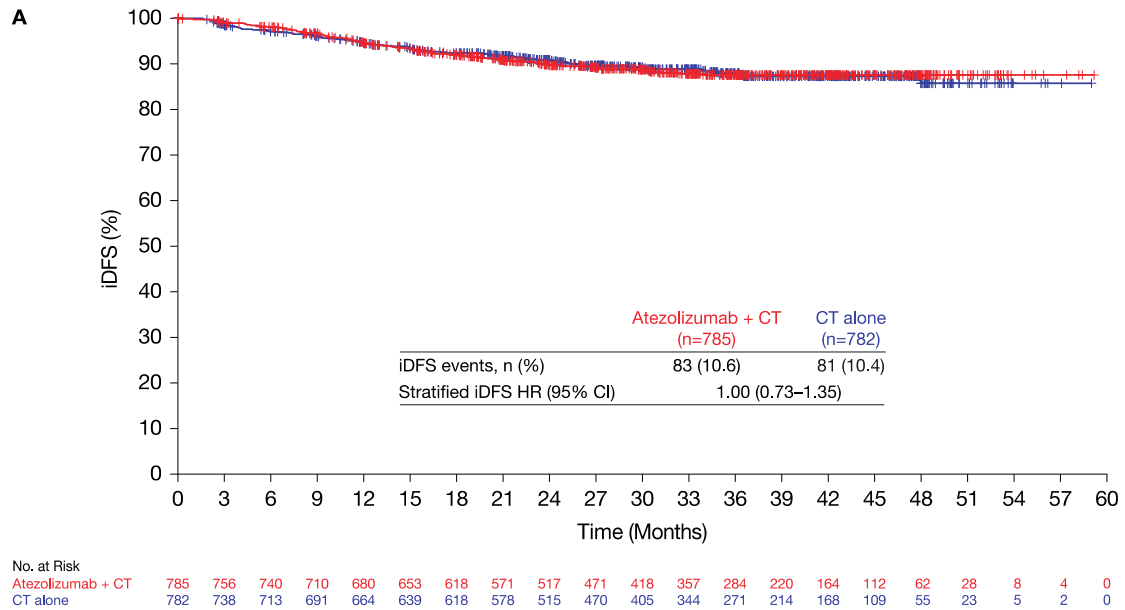
^a All entries are No. (%).

eFigure 1. Final Analysis of Invasive Disease-Free Survival in Key Subgroups.

A) PD-L1-Positive TNBC

B) Node-Positive TNBC

Abbreviations: CT, chemotherapy; HR, hazard ratio; iDFS, invasive disease-free survival; PD-L1, programmed death ligand 1; TNBC, triple-negative breast cancer.



eFigure 2. Overall Survival

Abbreviations: CT, chemotherapy; HR, hazard ratio; OS, overall survival.

