

SUPPLEMENTARY MATERIALS

Supplementary Table S1 Budget impact analysis model assumptions and parameters

Assumptions, parameters	Value	Source
Price of CT-P10 (% of MabThera® price)	70	Assumption
CT-P10 uptake (% market share)	30	Assumption
Consumption in other indications* and off-label use (% of total mg consumption from IMS)	10	Assumption
Share of the remaining IMS-derived mg consumption attributed to use in rheumatoid arthritis (%)	20	Roche finance report [1]
Share of the remaining IMS-derived mg consumption attributed to use in three cancer diagnoses (%)	80	Roche finance report [1]
Incidence rates of cancers, per 100,000 population (95% CI)		
DLBCL	3.81 (3.73–3.89)	Sant et al 2010 [2]
FL	2.18 (2.12–2.24)	Sant et al 2010 [2]
CLL	4.92 (4.83–5.01)	Sant et al 2010 [2]

RTX treatment rates in cancer (%)

DLBCL	95	Gang et al. 2015 [3] Issa et al. 2015 [4]
FL	80	Junlén et al. 2015 [5]
CLL	78	Knauff et al. 2015 [6]

Other assumptions for FL

Patients who receive maintenance therapy (%)	80	Marcus et al. 2008 [7]
Retreatment rate (%)	20	Based on authors' expert opinions
Average body surface area of patients (m ²)	1.79	Sacco 2010 [8]

*Use in granulomatosis with polyangiitis (formerly Wegener's granulomatosis) and microscopic polyangiitis.

CI confidence interval, *CLL* chronic lymphocytic leukemia, *DLBCL* diffuse large B cell lymphoma, *FL* follicular lymphoma, *RTX* reference rituximab.

Supplementary Table S2 Sources of reference rituximab list prices. Data accessed on: 14 February 2017

Country	Currency	List price (2×100 mg)	List price (500 mg)	Source	Available from
Austria	EUR	899.00	2158.35	Lotos Apotheke	http://www.lotosapotheke.at/
Belgium	EUR	410.76	1035.79	Rijksinstituut voor ziekte- en invaliditeitsverzekering. Pharmaceutical list prices	http://www.inami.fgov.be/SiteCollectionDocuments/liste-specialites-prices-20170101.pdf
Bulgaria	BGN	1013.45	2484.47	e-Аптека - Framar.bg	http://apteka.framar.bg/30037107/%D0%BC%D0%B0%D0%B1%D1%82%D0%B5%D1%80%D0%B0%D1%84%D0%BB%D0%B0%D0%BA%D0%BE%D0%BD-100-%D0%BC%D0%B3-10-%D0%BC%D0%BB-2
Croatia	HRK	3755.49	9220.34	Mediatelly. Cjelokupna baza podataka o lijekovima dostupnih u Hrvatskoj	https://mediatelly.co/hr/drugs/
Cyprus	EUR	662.35	1624.52	Republic of Cyprus. Ministry of Health	http://www.moh.gov.cy/moh/phs/p hs.nsf/dmlpress_en/dmlpress_en?OpenDocument&highlight=mabthera

Czech Republic	CZK	11427.77	28707.57	State Institute for Drug Control (SÚKL)	http://www.sukl.eu/modules/medication/search.php
Denmark	DKK	5188.15	12943.30	Lægemiddelstyrelsens hjemmeside med Danske medicinpriser	http://www.medicinpriser.dk/
Estonia	EUR	642.42	1606.03	Tervishoiuteenuste loetelu peatükis "Meditisiiniseadmed ja ravimid" sisalduvate ravimite maksumus, kasutusvajadus ja osakaalud teenuses	https://www.haigekassa.ee/sites/default/files/board_decision_files/lsa15.xlsx
Finland	EUR	708.26	1966.31	Kela. Medicinal Products Database	http://www.kela.fi/web/en/medicinal-products-database
France	EUR	474.61	1186.52	http://www.roche.fr	http://www.roche.fr/pharma/traitements-medicaux-innovants/nos-produits/mabthera.html
Germany	EUR	840.19	2044.49	Medipreis. Preisvergleich für Medikamente	https://www.medipreis.de
Greece	EUR	418.49	1050.02	Ιατροφαρμακευτική πληροφόρηση για τον επαγγελματία υγείας	http://www.galinos.gr/

Hungary	HUF	145081.00	361207.00	National Health Insurance Fund Administration of Hungary. Official pharmaceutical list prices (January 2017)	http://www.neak.gov.hu//data/cms1013832/PUPHA_20170101_v2_kozos.zip
Ireland	EUR	507.25	1266.09	Ireland's Health Service Executive	http://www.hse.ie/eng/about/Who/cpu/iphaPricechanges.pdf
Italy	EUR	870.48	2175.78	Medicina e Società	http://www.medisoc.it/scheda-rituximab/
Latvia	EUR	441.50	1102.00	A Slimnīca	https://www.aslimnica.lv/sites/default/files/iesniegumu_pielikumi/specifikacija_23k_1.xls
Lithuania	EUR	731.81	1719.71	Vaistai.lv - Drug information system	http://www.vaistai.lt/paieska/mabthera.html?AND http://www.visivaistai.lt/Vaistai/Mabthera/5975
Luxembourg	EUR	420.90	1061.37	Memorial. Journal Officiel du Grand-Duché de Luxembourg. Liste des Prix des Médicaments. 1 February 2016. pp. 175–442	http://www.apl-pharma.lu/docs/legis/liste-prix-medicaments-au-01-01-2016.pdf

Malta	EUR	750.00	1380.00	Ministry for Health, the Elderly, and Community Care (Malta)	https://health.gov.mt/en/cpsu/Documents/DCC%20Recommendations/Archive/DCC%20Recommendations%202011.pdf
Netherlands	EUR	554.91	1387.29	Medicijnkosten	http://www.medicijnkosten.nl
Poland	PLN	2445.01	6112.52	Wykaz leków refundowanych obowiązujący od dnia 1 stycznia 2017. Onkologia Online	http://www.onkologia-online.pl/medicine/show/219,mabthera%C2%AE
Portugal	EUR	457.62	1138.93	van Harten et al [9]; Carvalho et al [10]	n/a
Romania	RON	2221.55	5509.03	Lista medicamentelor compensate A-Z	http://medicamentecompensate.duv.ro/Lista-medicamentelor-compensate-A-Z.htm
Slovakia	EUR	494.36	1226.16	Vitajte	https://www.adc.sk/databazy/produkty
Slovenia	EUR	577.03	1442.64	Mediatelly. Popolna zbirka podatkov o zdravilih na voljo v Sloveniji	https://mediately.co/si/drugs
Spain	EUR	567.93	1342.06	Nomenclator.org Información sobre medicamentos, December 30, 2016	http://nomenclator.org/2016/mabthera-100-mg-concentrado-solucion/

Sweden	SVK	3787.00	9468.00	Swedish Dental and Pharmaceutical Benefits Agency (TLV)	http://www.tlv.se/In-English/medicines-new/
United Kingdom	GBP	349.26	873.15	British National Formulary 72	https://www.evidence.nhs.uk/formulary/bnf/current

Supplementary Table S3 Projected budget impact (savings) over 1 year due to the introduction of CT-P10, and the number of additional patients* that could subsequently gain access to rituximab treatment (scenario 2**)

	RA		NHL†		CLL		Other indications‡ and off-label use		Total§	
	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients
Austria	-1.48	122	-2.42	97	-1.10	70	-0.56	34	-5.56	322
Belgium	-0.61	104	-0.97	83	-0.44	59	-0.22	29	-2.24	275
Bulgaria	-0.23	32	-0.37	25	-0.17	18	-0.08	9	-0.84	84
Croatia	-0.22	33	-0.36	26	-0.17	19	-0.08	9	-0.83	86
Czech Republic	-0.18	30	-0.28	24	-0.13	17	-0.07	8	-0.66	79
Finland	-1.17	106	-1.78	84	-0.81	60	-0.42	30	-4.18	280
France	-5.49	826	-8.79	654	-4.01	469	-2.03	228	-20.32	2177
Germany	-9.14	799	-14.85	632	-6.77	454	-3.42	219	-34.18	2104
Hungary	-0.38	58	-0.61	46	-0.28	33	-0.14	16	-1.42	154
Ireland	-0.43	61	-0.69	48	-0.32	35	-0.16	17	-1.60	160
Italy	-7.18	589	-11.51	467	-5.25	335	-2.66	163	-26.60	1553
Netherlands	-1.36	174	-2.17	138	-0.99	99	-0.50	48	-5.02	460
Poland	-1.82	233	-2.91	184	-1.33	132	-0.67	64	-6.74	613

Portugal	-0.28	44	-0.45	34	-0.20	25	-0.10	12	-1.03	115
Romania	-0.51	75	-0.83	60	-0.38	43	-0.19	21	-1.91	198
Slovakia	-0.30	44	-0.49	35	-0.22	25	-0.11	12	-1.13	117
Slovenia	-0.19	23	-0.30	18	-0.14	13	-0.07	6	-0.69	61
Spain	-3.32	441	-5.47	350	-2.50	251	-1.25	121	-12.54	1162
Sweden	-0.98	175	-1.56	139	-0.71	100	-0.36	48	-3.62	462
United Kingdom	-3.06	531	-4.90	420	-2.23	302	-1.13	147	-11.32	1400

Estimates for European Union countries where IMS data are not available

Cyprus	-0.07	8	-0.12	6	-0.05	5	-0.03	2	-0.27	21
Denmark	-0.99	102	-1.59	81	-0.73	58	-0.37	28	-3.68	268
Estonia	-0.07	8	-0.12	6	-0.05	5	-0.03	2	-0.27	21
Greece	-0.61	103	-0.97	82	-0.44	59	-0.22	28	-2.24	272
Latvia	-0.08	12	-0.12	10	-0.05	7	-0.03	3	-0.28	32
Lithuania	-0.17	18	-0.28	14	-0.13	10	-0.07	5	-0.65	47
Luxembourg	-0.03	6	-0.06	5	-0.03	3	-0.01	2	-0.13	15
Malta	-0.03	4	-0.06	3	-0.03	2	-0.01	1	-0.13	11
Total [§]	-40.37	4762	-65.03	3771	-29.67	2706	-15.01	1312	-150.07	12551

*Number of additional patients that could access rituximab treatment if all projected budget savings from the introduction of CT-P10 were allocated to this.

**Scenario 2 assumed CT-P10 uptake of 50% and that the cost of CT-P10 was 70% of the cost of reference rituximab.

†NHL comprised diffuse large B cell lymphoma and stage III–IV follicular lymphoma.

‡Granulomatosis with polyangiitis (formerly Wegener's granulomatosis) and microscopic polyangiitis.

§Total values may differ slightly from the sum of individual values, due to rounding.

CLL chronic lymphocytic leukemia, *NHL* non-Hodgkin's lymphoma, *RA* rheumatoid arthritis.

Supplementary Table S4 Projected budget impact (savings) over 3 years* due to the introduction of CT-P10, and the number of additional patients** that could subsequently gain access to rituximab treatment

	RA		NHL†		CLL		Other indications‡ and off-label use		Total§	
	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. of patients	Budget impact, million EUR	No. patients	Budget impact, million EUR	No. of patients
Austria	-5.62	465	-9.19	368	-4.19	264	-2.11	127	-21.12	1225
Belgium	-2.30	397	-3.67	314	-1.68	226	-0.85	110	-8.50	1046
Bulgaria	-0.86	121	-1.39	96	-0.63	69	-0.32	33	-3.21	318
Croatia	-0.85	125	-1.37	99	-0.63	71	-0.32	34	-3.17	329
Czech Republic	-0.68	114	-1.08	90	-0.49	65	-0.25	31	-2.50	300
Finland	-4.44	404	-6.77	320	-3.09	229	-1.59	113	-15.88	1065
France	-20.85	3138	-33.41	2485	-15.24	1783	-7.72	866	-77.23	8272
Germany	-34.74	3034	-56.43	2403	-25.74	1724	-12.99	834	-129.90	7995
Hungary	-1.46	222	-2.34	176	-1.07	126	-0.54	61	-5.40	585

Ireland	-1.64	231	-2.63	183	-1.20	131	-0.61	64	-6.08	610
Italy	-27.29	2239	-43.72	1773	-19.95	1272	-10.11	618	-101.06	5903
Netherlands	-5.15	663	-8.25	525	-3.77	377	-1.91	183	-19.08	1748
Poland	-6.91	884	-11.07	700	-5.05	502	-2.56	244	-25.60	2330
Portugal	-1.06	165	-1.69	131	-0.77	94	-0.39	46	-3.91	436
Romania	-1.95	286	-3.14	226	-1.43	162	-0.73	79	-7.26	753
Slovakia	-1.15	168	-1.86	133	-0.85	96	-0.43	46	-4.29	443
Slovenia	-0.71	87	-1.13	69	-0.52	50	-0.26	24	-2.61	230
Spain	-12.61	1677	-20.78	1328	-9.48	953	-4.76	459	-47.63	4417
Sweden	-3.71	667	-5.95	528	-2.71	379	-1.37	184	-13.74	1757
United Kingdom	-11.62	2018	-18.61	1598	-8.49	1147	-4.30	557	-43.02	5319

Estimates for European Union countries where IMS data are not available

Cyprus	-0.28	31	-0.45	24	-0.21	17	-0.10	8	-1.04	81
Denmark	-3.77	387	-6.05	306	-2.76	220	-1.40	107	-13.99	1020
Estonia	-0.27	31	-0.44	24	-0.20	17	-0.10	8	-1.02	81

Greece	-2.31	392	-3.69	310	-1.68	223	-0.85	108	-8.53	1034
Latvia	-0.29	46	-0.46	37	-0.21	26	-0.11	13	-1.06	122
Lithuania	-0.65	68	-1.08	54	-0.49	39	-0.25	19	-2.48	179
Luxembourg	-0.13	22	-0.21	17	-0.10	13	-0.05	6	-0.48	58
Malta	-0.12	16	-0.23	12	-0.10	9	-0.05	4	-0.50	41
Total [§]	-153.41	18097	-247.10	14330	-112.74	10283	-57.03	4986	-570.28	47695

*Scenario assumed CT-P10 uptake of 30% in the first year, 40% in the second year and 50% in the third year, and that the cost of CT-P10 was 70% of the cost of reference rituximab.

**Number of additional patients that could access rituximab treatment if all projected budget savings from the introduction of CT-P10 were allocated to this.

†NHL comprised diffuse large B cell lymphoma and stage III–IV follicular lymphoma.

‡Granulomatosis with polyangiitis (formerly Wegener's granulomatosis) and microscopic polyangiitis.

§Total values may differ slightly from the sum of individual values, due to rounding.

CLL chronic lymphocytic leukemia, *NHL* non-Hodgkin's lymphoma, *RA* rheumatoid arthritis.

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