

SUPPLEMENTARY MATERIAL

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APPENDIX I MODEL PARAMETERS AND DISTRIBUTIONS

Table I.1 Distribution of mRS score at 90 days following the event, data source: meta-analysis²¹

Description	Parameter	Uncertainty		Distribution
Intervention arm				
MT+IVT 3-month mRS 0	0.099	Alpha 51.98	Beta 473.02	Dirichlet
MT+IVT 3-month mRS 1	0.171	Alpha 89.78	Beta 435.23	Dirichlet
MT+IVT 3-month mRS 2	0.194	Alpha 101.85	Beta 423.15	Dirichlet
MT+IVT 3-month mRS 3	0.166	Alpha 87.15	Beta 473.85	Dirichlet
MT+IVT 3-month mRS 4	0.173	Alpha 90.83	Beta 434.18	Dirichlet
MT+IVT 3-month mRS 5	0.059	Alpha 30.98	Beta 494.03	Dirichlet
MT+IVT 3-month mRS 6	0.138	Alpha 72.45	Beta 452.55	Dirichlet
MT 3-month mRS 0	0.102	Alpha 11.02	Beta 96.98	Dirichlet
MT 3-month mRS 1	0.157	Alpha 16.96	Beta 91.04	Dirichlet
MT 3-month mRS 2	0.176	Alpha 19.01	Beta 88.99	Dirichlet
MT 3-month mRS 3	0.185	Alpha 19.98	Beta 88.02	Dirichlet
MT 3-month mRS 4	0.074	Alpha 7.99	Beta 100.01	Dirichlet
MT 3-month mRS 5	0.074	Alpha 7.99	Beta 100.01	Dirichlet
MT 3-month mRS 6	0.232	Alpha 25.06	Beta 82.94	Dirichlet
Control arm				
IVT 3-month mRS 0	0.051	Alpha 28.82	Beta 536.18	Dirichlet
IVT 3-month mRS 1	0.081	Alpha 45.77	Beta 519.24	Dirichlet
IVT 3-month mRS 2	0.138	Alpha 77.97	Beta 487.03	Dirichlet
IVT 3-month mRS 3	0.175	Alpha 98.88	Beta 466.13	Dirichlet
IVT 3-month mRS 4	0.237	Alpha 133.91	Beta 431.10	Dirichlet
IVT 3-month mRS 5	0.133	Alpha 75.15	Beta 489.86	Dirichlet
IVT 3-month mRS 6	0.185	Alpha 104.53	Beta 460.47	Dirichlet
no IVT 3-month mRS 0	0.036	Alpha 2.88	Beta 77.12	Dirichlet
no IVT 3-month mRS 1	0.062	Alpha 4.96	Beta 75.04	Dirichlet
no IVT 3-month mRS 2	0.125	Alpha 10.00	Beta 70.00	Dirichlet
no IVT 3-month mRS 3	0.087	Alpha 6.96	Beta 73.04	Dirichlet
no IVT 3-month mRS 4	0.312	Alpha 24.96	Beta 55.04	Dirichlet
no IVT 3-month mRS 5	0.15	Alpha 12.00	Beta 68.00	Dirichlet
no IVT 3-month mRS 6	0.228	Alpha 18.24	Beta 61.76	Dirichlet

Table I.2 Subsequent mortality risk according to mRS score at 90 days, data source:

OxVasc²⁷

mRS 0-3 at 90 days	Coefficient	Standard error	Distribution
age1	0.06467	0.00757	Bootstrap
age2	0.05083	0.01434	Bootstrap
female	-0.11766	0.09292	Bootstrap
1	0.25940	0.20662	Bootstrap
2	0.64727	0.20501	Bootstrap
3	1.16960	0.02045	Bootstrap
cons	-12.38158	0.59279	Bootstrap
gamma	0.05953	0.00320	Bootstrap
mRS 4 at 90 days	Coefficient	Standard error	Distribution
age1	0.08382	0.01949	Bootstrap
age2	0.04636	0.01981	Bootstrap
female	-0.19714	0.18359	Bootstrap
cons	-11.08911	1.47799	Bootstrap
gamma	0.02522	0.00493	Bootstrap
mRS 5 at 90 days	Coefficient	Standard error	Distribution
age1	0.05182	0.02760	Bootstrap
age2	0.12207	0.03009	Bootstrap
female	-0.71592	0.27862	Bootstrap
cons	-7.37280	2.03774	Bootstrap
gamma	-0.00285	0.00686	Bootstrap

Table I.3 Equations predicting health utilities at baseline, 90 days, 1 to 5 years, data

source: OxVasc²⁷

Variable	Coefficient	Standard error	Distribution
At baseline			
1.disability0	-0.22651	0.02930	Bootstrap
age	-0.00539	0.00059	Bootstrap
gender	0.03291	0.02639	Bootstrap
cons	0.95359	0.04732	Bootstrap
At 90 days			
mRS 0 intercept	0.80300	0.05240	Bootstrap
mRS 1	-0.06610	0.02380	Bootstrap
mRS 2	-0.17000	0.02510	Bootstrap
mRS 3	-0.33200	0.02760	Bootstrap

Variable	Coefficient	Standard error	Distribution
mRS 4	-0.62100	0.03510	Bootstrap
mRS 5	-0.92100	0.04510	Bootstrap
age	0.00072	0.00058	Bootstrap
male	0.03710	0.01430	Bootstrap
At 1 year			
mRS 0 intercept	0.88300	0.05980	Bootstrap
mRS 1	-0.06830	0.02640	Bootstrap
mRS 2	-0.14800	0.02790	Bootstrap
mRS 3	-0.29800	0.03070	Bootstrap
mRS 4	-0.42700	0.03950	Bootstrap
mRS 5	-0.83000	0.06610	Bootstrap
age	-0.00111	0.00068	Bootstrap
male	0.05190	0.01630	Bootstrap
At 2 years			
mRS 0 intercept	0.96000	0.07280	Bootstrap
mRS 1	-0.06340	0.03150	Bootstrap
mRS 2	-0.11200	0.03370	Bootstrap
mRS 3	-0.27300	0.03810	Bootstrap
mRS 4	-0.38900	0.04960	Bootstrap
mRS 5	-0.82300	0.10300	Bootstrap
age	-0.00283	0.00085	Bootstrap
male	0.04740	0.01990	Bootstrap
At 3 years			
mRS 0 intercept	0.96733	0.07653	Gamma (modelled as disutility)
mRS 1	-0.06347	0.03267	Gamma (modelled as disutility)
mRS 2	-0.12067	0.03500	Gamma (modelled as disutility)
mRS 3	-0.28233	0.04047	Gamma (modelled as disutility)
mRS 4	-0.38433	0.05280	Gamma (modelled as disutility)
mRS 5	-0.82233	0.11000	Gamma (modelled as disutility)
age	-0.00303	0.00090	Gamma (modelled as disutility)
male	0.05037	0.02100	Gamma (modelled as disutility)
At 4 years			
mRS 0 intercept	0.97467	0.08027	Gamma (modelled as disutility)
mRS 1	-0.06353	0.03383	Gamma (modelled as disutility)
mRS 2	-0.12933	0.03630	Gamma (modelled as disutility)
mRS 3	-0.29167	0.04283	Gamma (modelled as disutility)
mRS 4	-0.37967	0.05600	Gamma (modelled as disutility)
mRS 5	-0.82167	0.11700	Gamma (modelled as disutility)
age	-0.00324	0.00094	Gamma (modelled as disutility)
male	0.05333	0.02210	Gamma (modelled as disutility)

Variable	Coefficient	Standard error	Distribution
At 5 years			
mRS 0 intercept	0.98200	0.08400	Bootstrap
mRS 1	-0.06360	0.03500	Bootstrap
mRS 2	-0.13800	0.03760	Bootstrap
mRS 3	-0.30100	0.04520	Bootstrap
mRS 4	-0.37500	0.05920	Bootstrap
mRS 5	-0.82100	0.12400	Bootstrap
age	-0.00344	0.00099	Bootstrap
male	0.05630	0.02320	Bootstrap

Table I.4 Equations predicting health and social care use at 90 days, 1 to 5 years, data

source: OxVasc²⁷

Variable	Coefficient	Standard error	Distribution
Length of stay at 90 days			
mRS 0 intercept	1.288	3.87	Bootstrap
mRS 1	0.977	1.83	Bootstrap
mRS 2	3.94	1.93	Bootstrap
mRS 3	17.43	2.07	Bootstrap
mRS 4	48.87	2.37	Bootstrap
mRS 5	62.02	2.75	Bootstrap
age	0.00566	0.04	Bootstrap
male	-0.513	1.02	Bootstrap
Length of stay at 1 year			
mRS 0 intercept	10.27	5.78	Bootstrap
mRS 1	0.651	2.74	Bootstrap
mRS 2	3.403	2.89	Bootstrap
mRS 3	13.49	3.10	Bootstrap
mRS 4	34.70	3.54	Bootstrap
mRS 5	50.36	4.11	Bootstrap
age	-0.11	0.06	Bootstrap
male	-1.133	1.52	Bootstrap
Length of stay at 2 years			
mRS 0 intercept	-7.04	3.86	Bootstrap
mRS 1	0.166	1.77	Bootstrap
mRS 2	1.473	1.87	Bootstrap
mRS 3	5.29	2.04	Bootstrap

Variable	Coefficient	Standard error	Distribution
mRS 4	2.700	2.42	Bootstrap
mRS 5	1.992	3.04	Bootstrap
age	0.14	0.04	Bootstrap
male	0.195	1.03	Bootstrap
Length of stay at 3 years			
mRS 0 intercept	-8.08	4.49	Bootstrap
mRS 1	0.321	2.04	Bootstrap
mRS 2	2.427	2.16	Bootstrap
mRS 3	9.00	2.41	Bootstrap
mRS 4	4.87	2.82	Bootstrap
mRS 5	1.494	3.71	Bootstrap
age	0.14	0.05	Bootstrap
male	0.696	1.22	Bootstrap
Length of stay at 3 years			
mRS 0 intercept	1.288	3.87	Bootstrap
mRS 1	0.977	1.83	Bootstrap
mRS 2	3.94	1.93	Bootstrap
mRS 3	17.43	2.07	Bootstrap
mRS 4	48.87	2.37	Bootstrap
mRS 5	62.02	2.75	Bootstrap
age	0.00566	0.04	Bootstrap
male	-0.513	1.02	Bootstrap
Length of stay at 4 years			
mRS 0 intercept	-5.794	3.64	Bootstrap
mRS 1	1.141	1.65	Bootstrap
mRS 2	3.93	1.75	Bootstrap
mRS 3	7.68	1.97	Bootstrap
mRS 4	5.46	2.32	Bootstrap
mRS 5	0.711	3.08	Bootstrap
age	0.15	0.04	Bootstrap
male	-1.80	0.99	Bootstrap
Length of stay at 5 years			
mRS 0 intercept	-0.175	4.51	Bootstrap
mRS 1	1.463	2.02	Bootstrap
mRS 2	1.755	2.14	Bootstrap
mRS 3	7.95	2.45	Bootstrap
mRS 4	4.87	2.89	Bootstrap
mRS 5	0.0104	4.05	Bootstrap
age	0.09	0.05	Bootstrap
male	-2.12	1.21	Bootstrap

Variable	Coefficient	Standard error	Distribution
Day cases at 90 days			
mRS 0 intercept	0.265	0.24	Bootstrap
mRS 1	0.0618	0.12	Bootstrap
mRS 2	0.0410	0.12	Bootstrap
mRS 3	0.0287	0.13	Bootstrap
mRS 4	0.112	0.15	Bootstrap
mRS 5	-0.0804	0.17	Bootstrap
age	-0.00353	0.00	Bootstrap
male	0.0908	0.06	Bootstrap
Day cases at 1 year			
mRS 0 intercept	-0.287	0.67	Bootstrap
mRS 1	0.140	0.32	Bootstrap
mRS 2	-0.00288	0.34	Bootstrap
mRS 3	0.252	0.36	Bootstrap
mRS 4	0.325	0.41	Bootstrap
mRS 5	-0.242	0.48	Bootstrap
age	0.00132	0.01	Bootstrap
male	0.279	0.18	Bootstrap
Day cases at 2 years			
mRS 0 intercept	-0.757	0.69	Bootstrap
mRS 1	0.278	0.32	Bootstrap
mRS 2	0.0230	0.34	Bootstrap
mRS 3	-0.0906	0.37	Bootstrap
mRS 4	0.0721	0.43	Bootstrap
mRS 5	-0.0291	0.55	Bootstrap
age	0.0105	0.01	Bootstrap
male	0.248	0.19	Bootstrap
Day cases at 3 years			
mRS 0 intercept	-1.296	0.79	Bootstrap
mRS 1	0.510	0.36	Bootstrap
mRS 2	0.0612	0.38	Bootstrap
mRS 3	-0.00762	0.43	Bootstrap
mRS 4	0.249	0.50	Bootstrap
mRS 5	0.0815	0.66	Bootstrap
age	0.01	0.01	Bootstrap
male	0.340	0.22	Bootstrap
Day cases at 4 years			
mRS 0 intercept	-0.878	0.79	Bootstrap
mRS 1	0.133	0.36	Bootstrap

Variable	Coefficient	Standard error	Distribution
mRS 2	-0.154	0.38	Bootstrap
mRS 3	-0.214	0.43	Bootstrap
mRS 4	-0.145	0.50	Bootstrap
mRS 5	-0.320	0.67	Bootstrap
age	0.0120	0.01	Bootstrap
male	0.321	0.22	Bootstrap
Day cases at 5 years			
mRS 0 intercept	-0.151	0.27	Bootstrap
mRS 1	-0.00737	0.12	Bootstrap
mRS 2	-0.0889	0.13	Bootstrap
mRS 3	-0.169	0.15	Bootstrap
mRS 4	-0.100	0.17	Bootstrap
mRS 5	-0.285	0.24	Bootstrap
age	0.01	0.00	Bootstrap
male	0.0679	0.07	Bootstrap
Outpatient visits at 90 days			
mRS 0 intercept	4.70	0.41	Bootstrap
mRS 1	-0.225	0.20	Bootstrap
mRS 2	-0.219	0.21	Bootstrap
mRS 3	-0.48	0.22	Bootstrap
mRS 4	-1.46	0.25	Bootstrap
mRS 5	-1.62	0.29	Bootstrap
age	-0.02	0.00	Bootstrap
male	0.126	0.11	Bootstrap
Outpatient visits at 1 year			
mRS 0 intercept	3.85	0.88	Bootstrap
mRS 1	0.73	0.42	Bootstrap
mRS 2	1.46	0.44	Bootstrap
mRS 3	1.19	0.47	Bootstrap
mRS 4	2.30	0.54	Bootstrap
mRS 5	0.343	0.63	Bootstrap
age	-0.05	0.01	Bootstrap
male	0.87	0.23	Bootstrap
Outpatient visits at 2 years			
mRS 0 intercept	2.54	0.93	Bootstrap
mRS 1	0.76	0.43	Bootstrap
mRS 2	1.09	0.45	Bootstrap
mRS 3	0.619	0.49	Bootstrap

Variable	Coefficient	Standard error	Distribution
mRS 4	1.20	0.59	Bootstrap
mRS 5	0.171	0.74	Bootstrap
age	-0.02	0.01	Bootstrap
male	0.56	0.25	Bootstrap
Outpatient visits at 3 years			
mRS 0 intercept	1.369	0.87	Bootstrap
mRS 1	0.80	0.39	Bootstrap
mRS 2	1.13	0.42	Bootstrap
mRS 3	0.94	0.47	Bootstrap
mRS 4	0.99	0.55	Bootstrap
mRS 5	0.776	0.72	Bootstrap
age	-0.00763	0.01	Bootstrap
male	0.41	0.24	Bootstrap
Outpatient visits at 4 years			
mRS 0 intercept	2.54	0.99	Bootstrap
mRS 1	0.167	0.45	Bootstrap
mRS 2	0.568	0.47	Bootstrap
mRS 3	0.631	0.54	Bootstrap
mRS 4	0.294	0.63	Bootstrap
mRS 5	-0.109	0.84	Bootstrap
age	-0.00988	0.01	Bootstrap
male	0.0603	0.27	Bootstrap
Outpatient visits at 5 years			
mRS 0 intercept	1.005	1.40	Bootstrap
mRS 1	0.663	0.63	Bootstrap
mRS 2	0.752	0.67	Bootstrap
mRS 3	1.28	0.76	Bootstrap
mRS 4	0.530	0.90	Bootstrap
mRS 5	-0.0198	1.26	Bootstrap
age	0.00252	0.02	Bootstrap
male	0.468	0.38	Bootstrap
A&E visits 90 days			
mRS 0 intercept	0.32	0.13	Bootstrap
mRS 1	0.00822	0.06	Bootstrap
mRS 2	0.11	0.06	Bootstrap
mRS 3	0.17	0.07	Bootstrap
mRS 4	0.35	0.08	Bootstrap
mRS 5	0.24	0.09	Bootstrap

Variable	Coefficient	Standard error	Distribution
age	-0.000716	0.00	Bootstrap
male	0.0455	0.03	Bootstrap
A&E visits 1 year			
mRS 0 intercept	0.29	0.14	Bootstrap
mRS 1	-0.00551	0.07	Bootstrap
mRS 2	0.0655	0.07	Bootstrap
mRS 3	0.24	0.07	Bootstrap
mRS 4	0.0909	0.09	Bootstrap
mRS 5	0.0474	0.10	Bootstrap
age	-0.00110	0.00	Bootstrap
male	-0.0217	0.04	Bootstrap
A&E visits 2 years			
mRS 0 intercept	-0.0771	0.14	Bootstrap
mRS 1	-0.0232	0.06	Bootstrap
mRS 2	0.0381	0.07	Bootstrap
mRS 3	0.116	0.07	Bootstrap
mRS 4	0.0579	0.08	Bootstrap
mRS 5	-0.00926	0.11	Bootstrap
age	0.00	0.00	Bootstrap
male	-0.0346	0.04	Bootstrap
A&E visits 3 years			
mRS 0 intercept	-0.142	0.17	Bootstrap
mRS 1	-0.0239	0.08	Bootstrap
mRS 2	0.15	0.08	Bootstrap
mRS 3	0.34	0.09	Bootstrap
mRS 4	0.24	0.10	Bootstrap
mRS 5	0.104	0.14	Bootstrap
age	0.00	0.00	Bootstrap
male	0.0471	0.04	Bootstrap
A&E visits 4 years			
mRS 0 intercept	-0.131	0.20	Bootstrap
mRS 1	-0.0248	0.09	Bootstrap
mRS 2	0.0768	0.10	Bootstrap
mRS 3	0.41	0.11	Bootstrap
mRS 4	0.0903	0.13	Bootstrap
mRS 5	0.121	0.17	Bootstrap
age	0.00	0.00	Bootstrap
male	0.0751	0.05	Bootstrap
A&E visits 5 years			

Variable	Coefficient	Standard error	Distribution
mRS 0 intercept	0.0131	0.20	Bootstrap
mRS 1	0.000845	0.09	Bootstrap
mRS 2	0.0227	0.10	Bootstrap
mRS 3	0.25	0.11	Bootstrap
mRS 4	0.0894	0.13	Bootstrap
mRS 5	0.00156	0.18	Bootstrap
age	0.00299	0.00	Bootstrap
male	0.00318	0.05	Bootstrap
Nursing home days at 90 days			
mRS 0 intercept	-2.602	1.67	Bootstrap
mRS 1	0.00149	0.79	Bootstrap
mRS 2	-0.156	0.84	Bootstrap
mRS 3	2.16	0.90	Bootstrap
mRS 4	3.14	1.02	Bootstrap
mRS 5	3.33	1.19	Bootstrap
age	0.05	0.02	Bootstrap
male	-0.425	0.44	Bootstrap
Nursing home days at 1 year			
mRS 0 intercept	-20.65	11.11	Bootstrap
mRS 1	-0.162	5.26	Bootstrap
mRS 2	-0.960	5.55	Bootstrap
mRS 3	9.392	5.95	Bootstrap
mRS 4	48.55	6.80	Bootstrap
mRS 5	77.57	7.89	Bootstrap
age	0.47	0.12	Bootstrap
male	-6.59	2.93	Bootstrap
Nursing home days at 2 years			
mRS 0 intercept	-59.73	17.83	Bootstrap
mRS 1	3.885	8.19	Bootstrap
mRS 2	0.713	8.66	Bootstrap
mRS 3	28.95	9.44	Bootstrap
mRS 4	94.57	11.17	Bootstrap
mRS 5	179.80	14.05	Bootstrap
age	1.03	0.20	Bootstrap
male	-5.368	4.78	Bootstrap
Nursing home days at 3 years			
mRS 0 intercept	-70.76	19.12	Bootstrap
mRS 1	6.298	8.68	Bootstrap

Variable	Coefficient	Standard error	Distribution
mRS 2	0.698	9.21	Bootstrap
mRS 3	36.62	10.27	Bootstrap
mRS 4	90.15	12.03	Bootstrap
mRS 5	180.20	15.80	Bootstrap
age	1.22	0.21	Bootstrap
male	-4.938	5.18	Bootstrap
Nursing home days at 4 years			
mRS 0 intercept	-87.83	21.66	Bootstrap
mRS 1	11.44	9.80	Bootstrap
mRS 2	6.917	10.41	Bootstrap
mRS 3	56.57	11.74	Bootstrap
mRS 4	92.17	13.81	Bootstrap
mRS 5	179.80	18.33	Bootstrap
age	1.44	0.24	Bootstrap
male	-4.303	5.89	Bootstrap
Nursing home days at 5 years			
mRS 0 intercept	-94.59	25.28	Bootstrap
mRS 1	15.86	11.31	Bootstrap
mRS 2	9.896	12.00	Bootstrap
mRS 3	66.07	13.73	Bootstrap
mRS 4	91.64	16.20	Bootstrap
mRS 5	204.00	22.70	Bootstrap
age	1.68	0.29	Bootstrap
male	-10.33	6.80	Bootstrap

mRS=modified Rankin Scale

APPENDIX II HETEROGENEITY OF KEY MODEL PARAMETERS

Parameter	Country/s of origin*	Country-level heterogeneity
Number of eligible ischaemic stroke cases	Age/gender and country-specific ²³	-
Effectiveness of the intervention	Global ²¹ : Australia, Austria, Canada, Denmark, France, Germany, Ireland, The Netherlands, New Zealand, South Korea, Spain, Sweden, Switzerland, USA and United Kingdom	Fixed across 32 countries
5-year mRS distribution (including death), given 3-month mRS score	United Kingdom (OXVASC ²⁷)	Age/gender differences
Treatment protocol	Italy ¹⁸ and United Kingdom ²⁰	Fixed across 32 countries
Medical devices and pharmaceutical unit costs for treatment	Italy ¹⁸ and United Kingdom ²⁰	Fixed across 32 countries
Staff performing treatment unit costs	Italy ¹⁸ and United Kingdom ²⁰	Use of country-level weighting factors
Utilities	United Kingdom (OXVASC ²⁷)	Age/gender differences
Post-acute stroke health and social care resource use	United Kingdom (OXVASC ²⁷)	Age/gender differences
Post-acute stroke health and social care unit costs	Country-specific ³⁰	-
Days of informal care	Country-specific ³⁰	-
Employment rates	Country-specific ^{31,32}	-
Gender-specific earnings	Country-specific ^{2,31}	-

*full citation in reference list of the manuscript

APPENDIX III TREATMENT RESOURCE USE, DATA SOURCE: COST-EFFECTIVENESS

STUDIES ^{18,20}

	Item	Resource use
MT	Device	1.2
	Consumables	1
	Anaesthetist	4
	Anaesthetist assistant	4
	Radiographer	3
	Neuroradiologist	3
	Registrar	3
	Nurse	3
	Scrub Nurse	3
IVT	Drug	1
	Blood test	1
	Nurse activate stroke team	0.08
	Stroke team assessment	0.5
	Registrar accompanies patient to CT scan	1
	Consultant reviews CT results and	0.5
	Nurse assessment	0.08
	Registrar time for IV-tPA infusion	1.25
	Additional 12 routine observations	1
	1:1 care for 5 hours with senior nurse	5
	Junior staff review	0.42
	Overnight junior staff review	0.17
	Consultant review after infusion	0.33
Non-thrombolysis procedure	Blood test	1
	CT scan	1
	ER Doctor assessment	0.25
	Nurse to accompany to CT scan	1
	Nurse assessment	0.08
	Routine nurse observation 4 in 24 hours	0.33
	Junior staff review	0.21
	Consultant review at 24 hours	0.25

MT=Mechanical Thrombectomy, IVT=intravenous thrombolysis

APPENDIX IV TREATMENT COSTS IN 2017 \$: DEVICES, CONSUMABLES AND STAFF

Country	Cost of the individual procedure			MT intervention		Standard care		Eligible patients aged <80
	MT	IVT	Non-thrombolytic	MT+IVT (<80)	MT alone (>=80)	IVT alone (<80)	Non-thrombolytic alone (>=80)	
Austria	6,295	837	183	7,315	6,478	1,020	183	59.3%
Belgium	6,203	812	176	7,191	6,379	988	176	55.1%
Bulgaria	5,926	738	155	6,820	6,081	893	155	63.2%
Croatia	5,848	717	149	6,714	5,996	866	149	61.9%
Cyprus	5,973	751	159	6,882	6,131	909	159	56.4%
Czech Republic	5,861	721	150	6,732	6,011	871	150	62.5%
Denmark	6,442	876	195	7,513	6,637	1,071	195	59.1%
Estonia	6,162	801	173	7,136	6,335	974	173	64.5%
Finland	8,817	1,511	377	10,705	9,194	1,888	377	53.2%
France	6,923	1,005	231	8,159	7,155	1,236	231	49.3%
Germany	6,367	856	189	7,412	6,556	1,045	189	59.2%
Greece	6,137	795	171	7,103	6,308	966	171	47.4%
Hungary	5,783	700	144	6,627	5,927	844	144	63.7%
Ireland	6,850	985	226	8,062	7,076	1,211	226	61.4%
Italy	6,451	878	195	7,524	6,646	1,074	195	45.9%
Latvia	6,058	773	165	6,996	6,223	939	165	63.8%
Lithuania	5,947	744	157	6,848	6,104	900	157	63.6%
Luxembourg	6,263	828	181	7,273	6,444	1,009	181	54.4%
Malta	6,205	813	176	7,194	6,381	989	176	65.7%
The Netherlands	6,824	978	224	8,026	7,047	1,202	224	57.3%
Poland	6,174	804	174	7,152	6,348	978	174	60.5%
Portugal	6,281	833	182	7,296	6,463	1,015	182	48.7%
Romania	5,840	715	148	6,704	5,988	864	148	64.0%
Slovakia	5,998	758	160	6,917	6,159	918	160	68.4%
Slovenia	6,034	767	163	6,964	6,197	930	163	57.6%
Spain	6,795	970	222	7,987	7,016	1,192	222	49.9%
Sweden	9,241	1,624	409	11,274	9,650	2,033	409	54.0%
Total EU-27	6,433	874	194	7,501	6,627	1,068	194	56.3%
United Kingdom	6,848	985	226	8,059	7,074	1,210	226	52.2%
Iceland	6,883	994	228	8,105	7,111	1,222	228	57.0%
Israel	6,291	836	183	7,310	6,474	1,019	183	59.0%
Norway	7,005	1,026	238	8,269	7,242	1,264	238	57.1%
Switzerland	6,132	793	171	7,096	6,303	964	171	55.4%
Total 32 countries	6,464	882	196	7,543	6,661	1,078	196	56.0%

APPENDIX V HEALTH AND SOCIAL RESOURCE USE COUNTRY WEIGHTS, DATA

SOURCE: A CROSS-NATIONAL PANEL DATA BASE³⁰

Table V.1 0-90 days health care resource use country-specific weights

0-90 days	Length of stay	Day cases	Outpatient	A & E	Nursing home
Austria	1.08	4.16	3.11	1.65	0.91
Belgium	0.80	1.31	0.88	0.53	4.07
Bulgaria	0.29	NA	0.62	0.36	0.57
Croatia	0.66	2.88	1.10	0.41	0.21
Cyprus	0.51	0.30	4.93	4.85	0.45
Czech Republic	1.24	0.04	4.72	0.23	0.91
Denmark	0.31	2.09	0.64	0.64	1.20
Estonia	0.83	0.56	2.32	1.81	0.55
Finland	1.15	0.95	0.84	0.70	0.87
France	0.56	0.49	0.77	1.38	1.41
Germany	0.92	1.03	2.71	0.20	0.68
Greece	0.52	NA	0.28	1.55	0.53
Hungary	0.79	NA	5.97	0.28	0.53
Iceland	0.89	NA	2.89	1.20	1.32
Ireland	0.93	0.26	0.88	2.02	0.41
Israel	0.62	0.02	2.31	3.01	0.45
Italy	0.81	1.07	1.60	1.40	0.61
Latvia	0.57	4.46	0.79	0.54	0.52
Lithuania	0.64	0.04	1.66	0.69	1.16
Luxembourg	0.89	0.71	2.25	0.92	2.08
Malta	1.27	0.09	0.67	0.99	0.36
The Netherlands	0.49	1.11	1.68	0.40	0.76
Norway	0.63	4.11	0.96	0.84	1.06
Poland	0.60	0.46	1.82	0.70	0.25
Portugal	0.69	0.16	1.23	3.27	0.44
Romania	0.48	6.07	2.36	0.14	0.86
Slovakia	0.58	NA	5.99	1.12	0.66
Slovenia	0.85	0.14	1.35	0.71	0.62
Spain	0.52	0.61	1.23	2.37	0.46
Sweden	0.55	0.98	1.07	1.14	1.12
Switzerland	0.88	NA	0.51	0.55	1.74

A&E= accidents and emergency; NA= not available, assumed to be equal to the average

Table V.2 1-5 years health care resource use country-specific weights

1 to 5 years	Length of stay	Day cases	Outpatient	A & E	Nursing home
Austria	2.40	0.45	2.40	0.96	1.51
Belgium	1.18	1.04	1.24	0.53	2.37
Bulgaria	1.92	NA	0.85	0.35	0.33
Croatia	1.70	0.92	1.68	0.50	0.74
Cyprus	0.53	0.11	4.31	2.93	0.77
Czech Republic	2.12	0.04	5.24	0.20	0.52
Denmark	0.91	0.37	0.71	0.55	1.04
Estonia	1.37	0.58	2.45	1.24	1.46
Finland	1.66	0.31	1.04	0.54	1.34
France	1.00	1.47	0.95	0.68	1.14
Germany	2.63	0.04	3.35	0.20	1.19
Greece	1.65	NA	0.38	1.08	0.21
Hungary	2.24	0.13	4.19	0.20	0.89
Iceland	NA	NA	NA	NA	NA
Ireland	0.89	1.35	0.89	0.95	0.88
Israel	NA	NA	NA	NA	NA
Italy	1.04	0.20	1.28	0.91	0.67
Latvia	1.54	0.46	1.13	0.56	0.84
Lithuania	2.06	0.13	1.90	0.59	3.36
Luxembourg	1.34	0.50	3.26	0.53	1.44
Malta	1.41	0.49	0.71	0.69	0.50
The Netherlands	0.70	0.83	2.02	0.30	1.24
Norway	NA	NA	NA	NA	NA
Poland	1.31	0.27	1.93	0.50	0.41
Portugal	0.73	0.50	1.21	1.84	0.37
Romania	1.82	0.80	2.53	0.12	1.58
Slovakia	1.64	0.00	4.83	0.67	1.22
Slovenia	1.42	0.11	1.46	0.50	1.36
Spain	0.79	0.49	1.37	1.58	0.58
Sweden	0.92	0.08	0.85	0.63	1.25
Switzerland	NA	NA	NA	NA	NA

A&E= accidents and emergency; NA= not available, assumed to be equal to the average

APPENDIX VI TOTAL 5-YEAR COSTS AFTER MT AND STANDARD CARE IN 2017 \$ MILLION.

	Mechanical thrombectomy				Standard care				Health & social care costs	Societal costs
	Health and social care	Informal care	Productivity losses	Societal costs	Health and social care	Informal care	Productivity losses	Societal costs	MT vs SC (95% UI)	MT vs SC (95% UI)
Austria	283	16	14	313	321	29	18	368	-38 (-78 to 20)	-55 (-94 to 14)
Belgium	290	13	13	316	330	24	17	371	-40 (-80 to 25)	-55 (-96 to 13)
Bulgaria	83	5	3	91	46	9	4	59	37 (32 to 43)	32 (27 to 41)
Croatia	54	6	2	62	35	11	3	49	19 (15 to 24)	13 (8 to 21)
Cyprus	4	1	0	5	3	1	1	5	0.8 (0.4 to 1.4)	0.2 (-0.4 to 1.2)
Czech Republic	189	16	8	214	176	29	11	215	14 (-2.2 to 35)	-1.5 (-21 to 31)
Denmark	153	9	10	171	174	16	13	203	-22 (-41 to 12)	-32 (-57 to 6)
Estonia	21	1	1	24	19	2	2	23	2 (0.03 to 5)	0.9 (-1.3 to 4)
Finland	264	4	8	277	298	7	11	316	-34 (-76 to 27)	-40 (-81 to 17)
France	916	50	48	1,013	944	95	62	1,101	-28 (-145 to 185)	-88 (-225 to 144)
Germany	3,746	145	182	4,072	4,237	261	239	4,738	-492 (-961 to 259)	-665 (-1,175 to 118)
Greece	178	11	4	193	173	21	6	200	5 (-18 to 38)	-7 (-34 to 32)
Hungary	173	8	6	187	156	14	8	178	18 (1.2 to 44)	10 (-9 to 40)
Ireland	51	5	5	61	54	9	7	70	-3 (-9 to 6)	-9 (-17 to 2)
Italy	1,148	79	37	1,265	1,215	157	50	1,422	-67 (-233 to 173)	-158 (-345 to 161)
Latvia	31	3	2	36	18	5	3	26	12 (11 to 15)	9 (7 to 14)
Lithuania	52	3	3	58	40	6	4	50	11 (7 to 18)	8 (3 to 17)

	Mechanical thrombectomy				Standard care				Health & social care costs	Societal costs
	Health and social care	Informal care	Productivity losses	Societal costs	Health and social care	Informal care	Productivity losses	Societal costs	MT vs SC (95% UI)	MT vs SC (95% UI)
Luxembourg	16	1	1	17	19	1	1	21	-3 (-5 to 1)	-4 (-6 to 0.5)
Malta	5	0	0	5	5	0	0	6	-0.2 (-0.7 to 0.5)	-0.5 (-1 to 0.4)
The Netherlands	397	10	22	430	452	19	30	500	-55 (-129 to 41)	-71 (-129 to 25)
Poland	481	21	18	520	397	37	24	459	84 (37 to 157)	61 (7 to 144)
Portugal	77	6	4	86	58	11	5	74	19 (13 to 28)	12 (4 to 26)
Romania	267	20	9	296	183	34	12	229	84 (65 to 114)	66 (42 to 107)
Slovakia	81	5	4	90	68	9	5	83	13 (6 to 23)	8 (0.3 to 19)
Slovenia	35	2	1	39	35	4	2	41	-0.1 (-4 to 6)	-2 (-7 to 6)
Spain	547	55	29	631	532	104	38	674	16 (-51 to 115)	-43 (-118 to 95)
Sweden	300	6	17	322	327	11	22	361	-28 (-75 to 45)	-38 (-80 to 30)
Total EU-27	10,958	554	467	11,979	11,735	1,015	618	13,369	-778 (-2,183 to 1,453)	-1,390 (-2,938 to 1,095)
Iceland	8	0.2	1	9	10	0.3	1	11	-1.4 (-3 to 0.5)	-2 (-3 to 0.2)
Israel	32	6	5	44	27	11	7	45	6 (3 to 10)	-1 (-6 to 7)
Norway	232	4	11	247	276	7	14	297	-44 (-85 to 11)	-50 (-86 to 14)
Switzerland	352	13	19	384	421	24	25	470	-69 (-129 to 13)	-86 (-144 to 7)
United Kingdom	1,037	54	63	1,154	1,128	100	84	1,313	-91 (-215 to 118)	-160 (-327 to 101)
Total 32 countries	12,595	634	570	13,800	13,576	1,164	756	15,496	-981 (-2,564 to 1,544)	-1,696 (-3,603 to 1,226)

Note: due to rounding the columns may not add up to the total values

APPENDIX VII ONE-WAY SENSITIVITY ANALYSES

Model assumption	Societal perspective			Health & Social Care perspective		
	ICER	NICE threshold	GDP threshold	ICER	NICE threshold	GDP threshold
		Probability	Probability		Probability	Probability
Base case	MT dominates	100%	100%	MT dominates	100%	100%
Lower bound UI from Goyal et al. 2016 meta-analysis	MT dominates	92%	96.8%	MT dominates	88.7%	96.5%
Upper bound UI from Goyal et al. 2016 meta-analysis	MT dominates	100%	100%	MT dominates	100%	100%
Using effectiveness from MR CLEAN*	MT dominates	100%	100%	MT dominates	100%	100%
Using effectiveness from RESCAVAT trial*	MT dominates	100%	100%	MT dominates	100%	100%
Using effectiveness from EXTEND-IA trial*	MT dominates	100%	100%	MT dominates	100%	100%
Using effectiveness from ESCAPE trial*	MT dominates	100%	100%	MT dominates	100%	100%
Varying treatment cost +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying treatment cost -20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying survival post-stroke +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying survival post-stroke -20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying all health utilities +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying all health utilities -20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying all health care costs +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying all health care costs -20%	MT dominates	100%	100%	MT dominates	100%	100%
Excluding all health care costs	MT dominates	100%	100%	€ 4,260	100%	100%
Varying all social care costs +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying all social care costs -20%	MT dominates	100%	100%	MT dominates	100%	100%
Excluding all social care costs	MT dominates	100%	100%	€ 2,280	100%	100%
No mRS3 patient receives informal care	MT dominates	100%	100%	MT dominates	100%	100%
All mRS3 patients receive informal care	MT dominates	100%	100%	MT dominates	100%	100%
Varying days of informal care received +20%	MT dominates	100%	100%	MT dominates	100%	100%
Varying days of informal care received -20%	MT dominates	100%	100%	MT dominates	100%	100%

Note: ICER=Incremental Cost-Effectiveness Ratio, GDP=Gross Domestic Product, €31,592, NICE=National Institute of Health and Care Excellence, €22,727; mRS= modified Rankin Scale, UI=95% Uncertainty Intervals. *Only 4 of the 5 trials included in the meta-analysis by Goyal et al., 2016 could be used. Evidence from the Swift Prime trial could not as the published results did not match the structure of the decision-analytic model (i.e. mRS5 and mRS6 estimates combined)