## **Online Resource 1:**

## Data input to the base case model

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Article title: Survival and costs of colorectal cancer treatment and effects of changing treatment strategies - a model approach.

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**Table 1** Frequency per-patient and values per-unit for primary treatments used in the base case model analysis. The frequencies show how many times an average patient with a certain diagnosis receives the listed treatment (see also the text). Costs are in 2011 €

Treatment first year after primary diagnosis (DRG, medical: M, surgical:	Row no.	Primary treatment stage				Unit cost (€)	Source
S)	110.	I	II	III	IV	(C)	
Resection of primary tumour		1	111	111	1 V		
Colon resection, w (148, S)	1	.210	.280	150	112	23,913	OUS
	1			.458	.443		
Colon resection, n (149, S)	2	.300	.401	.192	.023	11,688	OUS
Rectal resection, w (146, S)	3	.267	.174	.218	.120	18,546	OUS
Rectal resection, n (147, S)	4	.221	.145	.119	.0	12,486	OUS
Non-resection surgery	~	0	0	0.45	026	0.520	MDD
Endoscopic therapy colon;	5	.0	.0	.045	.026	9539	NPR
closure stoma, w (152, S)	_	001	006	000	024	4 <b>5</b> 50	, in
Endoscopic therapy colon;	6	.036	.036	.090	.026	6758	NPR
closure stoma, n (153, S)					404		
Endoscopic therapy rectum;		.0	.0	.0	.101	5519	OUS
TEM, w (157, S)	7						
Endoscopic therapy rectum;	8	.0	.0	.0	.034	2748	OUS
TEM, n (158, S)							
GI obstruction, w (180, S)	9	.0	.0	.0	.044	3939	OUS
GI obstruction, n (181, S)	10	.0	.0	.0	.015	2140	OUS
Endoscopic/other treatment							
Digestive malignancy, w (172, M)	11	.0	.107	.493	1.526	7526	NPR
Digestive malignancy, n (173, M)	12	.0	.0	.164	.184	4409	NPR
Aftercare and rehabilitation (465)	13	.0	.0	.030	.553	6207	NPR
Endoscopic insertion of stent to	14	.0	.0	.0	.008	1310	OUS
Gastro; tract, short therapy (703O)							
Treatment for metastasis							
Resection							
Liver metastasis resec., w (191B, S)	15	.0	.0	.0	.125	26,528	Source a
Lung metastasis resection (75, S)	16	.0	.0	.0	.019	18,968	Source b
Non-surgical supportive treatment and	care						
Liver metastasis (203, M)	17	.0	.0	.0	.188	6468	NPR, exp
Lung metastasis (82, M)	18	.0	.0	.0	.075	7664	NPR, exp
Chemo- and radiotherapy							•
Radiotherapy (409E, M)	19	.033	.075	.147	.056	645 *	Source c, exp
Palliative chemotherapy (M)	20	.0	.0	.0	.610	20,183 †	Source d
Adjuvant chemotherapy (M)	21	.0	.054	.535	.05	8677/ 7494	Source e

Note: *w*=with complications or co-morbidities; n=without complications or co-morbidities; exp=Expert opinion; OUS=observational study at Oslo University Hospital – Aker; NPR=National Patient Register based on data organized by Aas (1); \*=costs per visit at hospital for radiotherapy; †=costs in the first year of palliative treatment; Source a=(2), (20), (3), (4); Source b=(2), (4); Source c=(5, 6), exp.; Source d=(5, 7-10); Source e=(5, 7-10). Reproduced from (11) with the kind permission of Sage publishers.

## References

1. Aas E. Cost-effectiveness of screening for colorectal cancer with once-only flexible sigmoidoscopy and faecal occult blood test. Oslo University, Health Economics Research Programme; 2009.

- 2. Körner H, Söreide K, Stokkeland P, Söreide J. Systematic follow-up after curative surgery for colorectal cancer in Norway: A population-based audit of effectiveness, costs, and compliance. Journal of Gastrointestinal Surgery. 2005;9(3):320-8.
- 3. SøreideJ A, Eiriksson K, Sandvik O, Viste A, Horn A, Johnsen G, et al. Kirurgisk behandling av levermetastaser fra kolorektal kreft. Tidsskr Nor Legeforen 2008;128(1):50-3.
- 4. Kobayashi H, Mochizuki H, Sugihara K, Morita T, Kotake K, Teramoto T, et al. Characteristics of recurrence and surveillance tools after curative resection for colorectal cancer: A multicenter study. Surgery. 2007;141(1):67-75.
- 5. Delcò F, Egger R, Bauerfeind P, Beglinger C. Hospital health care resource utilization and costs of colorectal cancer during the first 3-year period following diagnosis in Switzerland. Alimentary Pharmacology & Therapeutics. 2005;21(5):615-22.
- 6. Sorbye H, Pfeiffer P, Cavalli-Björkman N, Qvortrup C, Holsen MH, Wentzel-Larsen T, et al. Clinical trial enrollment, patient characteristics, and survival differences in prospectively registered metastatic colorectal cancer patients. Cancer. 2009;115(20):4679-87.
- 7. van Steenbergen L, Elferink M, Krijnen P, Lemmens V, Siesling S, Rutten H, et al. Improved survival of colon cancer due to improved treatment and detection: a nationwide population-based study in The Netherlands 1989-2006. Annals of Oncology. 2010;21(11):2206-12.
- 8. Lemmens V, de Haan N, Rutten H, Martijn H, Loosveld O, Roumen R, et al. Improvements in population-based survival of patients presenting with metastatic rectal cancer in the south of the Netherlands, 1992–2008. Clinical and Experimental Metastasis. 2011;28(3):283-90.
- 9. Khattak MA, Townsend AR, Beeke C, Karapetis CS, Luke C, Padbury R, et al. Impact of age on choice of chemotherapy and outcome in advanced colorectal cancer. European Journal of Cancer. 2012;48(9):1293-8.
- 10. Jacob S, Ng W, Asghari R, Delaney GP, Barton MB. Estimation of an optimal chemotherapy utilisation rate for colon cancer: An evidence-based benchmark for cancer care. European Journal of Cancer. 2009;45(14):2503-9.
- 11. Joranger P, Nesbakken A, Hoff G, Sorbye H, Oshaug A, Aas E. Modeling and validating the cost and clinical pathway of colorectal cancer. Medical Decision Making. 2014.