

## Supplementary tables

Table S1: Relative odds (95% CLs) of treatment for colon cancer starting &gt;30 days of diagnosis by treatment type, stage, and socioeconomic factors: South Australian major public hospitals, 2000-2010 diagnoses\*

	Surgery		Radiotherapy		Chemotherapy		Any treatment (surgical cases)	
	n=1098	RO (95% CLs)	n=86	RO (95% CLs)	n=898	RO (95% CLs)	n=1098	RO (95% CLs)
<b>Age at diagnosis (years):</b>								
<50 (ref.)	53	1.00	13	1.00	109	1.00	53	1.00
50 - 59	116	1.61 (0.75, 3.46)	14	1.03 (0.05, 21.46)	176	0.84 (0.40, 1.76)	116	1.28 (0.59, 2.78)
60 - 69	226	2.10 (1.03, 4.28)	20	2.82 (0.20, 40.71)	273	0.91 (0.45, 1.83)	226	1.86 (0.92, 3.80)
70 - 79	396	1.65 (0.83, 3.28)	28	3.49 (0.27, 45.20)	292	1.37 (0.68, 2.79)	396	1.55 (0.78, 3.09)
80+	307	1.50 (0.74, 3.03)	11	NA	48	2.52 (0.78, 8.17)	307	1.43 (0.71, 2.88)
<b>Sex:</b>								
Male (ref.)	562	1.00	56	1.00	491	1.00	562	1.00
Female	536	0.87 (0.67, 1.13)	30	2.65 (0.27, 1.64)	407	1.23 (0.79, 1.91)	536	0.89 (0.68, 1.16)
<b>Socioeconomic:</b>								
Low (ref.)	336	1.00	25	1.00	287	1.00	336	1.00
Low-Med	273	1.69 (0.99, 2.12)	19	1.69 (0.09, 30.68)	229	0.71 (0.39, 1.27)	273	1.46 (1.00, 2.14)
Med-High	224	1.31 (0.90, 1.90)	20	7.01 (0.22, 223.56)	185	0.93 (0.49, 1.78)	224	1.28 (0.88, 1.88)
High	265	1.12 (0.76, 1.67)	22	1.37 (0.07, 27.36)	197	0.85 (0.45, 1.62)	265	1.09 (0.73, 1.62)
<b>Accessibility:</b>								
High (ref.)	899	1.00	66	1.00	716	1.00	899	1.00
Med-High	141	0.57 (0.28, 1.15)	9	NA	127	0.41 (0.09, 1.97)	141	0.57 (0.28, 1.16)
Poor	58	0.71 (0.33, 1.57)	11	NA	55	0.25 (0.05, 1.21)	58	0.63 (0.28, 1.38)
<b>Local Health Network:</b>								
Northern metro (ref.)	149	1.00	12	1.00	141	1.00	149	1.00
Central metro	421	0.49 (0.32, 0.75)	33	0.31 (0.01, 6.39)	291	0.85 (0.41, 1.76)	421	0.48 (0.31, 0.73)
Southern metro	281	0.39 (0.25, 0.63)	16	0.58 (0.03, 11.80)	252	0.83 (0.39, 1.78)	281	0.37 (0.24, 0.60)
Country South	88	0.69 (0.36, 1.33)	10	NA	83	3.94 (0.70, 22.22)	88	0.69 (0.36, 1.34)
Country North	159	0.78 (0.37, 1.66)	15	NA	131	2.42 (0.47, 12.36)	159	0.76 (0.35, 1.63)
<b>ACPS stage:</b>								
A (ref.)	169	1.00	3	1.00	12	1.00	169	1.00
B	471	0.67 (0.46, 0.98)	20	43.60 (0.38, 49.56)	130	1.60 (0.16, 16.54)	471	0.65 (0.45, 0.95)
C	252	0.69 (0.46, 1.06)	21	24.12 (0.22, 26.91)	409	1.76 (0.19, 16.48)	252	0.66 (0.43, 1.00)
D	180	0.54 (0.33, 0.86)	39	4.39 (0.07, 27.89)	320	0.24 (0.03, 2.17)	180	0.44 (0.27, 0.72)
(UK)	(26)	(0.64 (0.26, 1.57))	(3)	NA	(27)	(0.41 (0.04, 4.48))	(26)	(0.58 (0.23, 1.43))
<b>Grade:</b>								
Well diff. (ref.)	38	1.00	5	1.00	18	1.00	38	1.00
Mod diff.	770	0.85 (0.43, 1.68)	53	1.49 (0.11, 19.97)	581	0.58 (0.07, 4.81)	770	0.82 (0.41, 1.62)
Poorly/undiff.	209	0.57 (0.27, 1.21)	19	1.11 (0.06, 21.24)	213	0.46 (0.05, 3.89)	209	0.54 (0.26, 1.15)
(UK)	(81)	(1.87 (0.82, 4.26))	(9)	NA	(86)	(0.13 (0.02, 1.11))	(81)	(1.62 (0.71, 3.69))
<b>Diagnosis year:</b>								
2000 - 2005	541	1.00	52	1.00	451	1.00	541	1.00
2006 - 2010	557	1.41 (1.09, 1.83)	34	0.21 (0.03, 1.64)	447	1.59 (1.02, 2.48)	557	1.39 (1.07, 2.88)

\*Derived from multivariate logistic regression (see "Methods")

RO – Relative odds; CLs – confidence limits; ref. – reference; NA – not applicable; ACPS- Australian Clinico-Pathological Staging; UK – unknown; diff – differentiated; undiff. - undifferentiated.

Table S2: Relative odds (95% CLs) of treatment for colon cancer starting &gt;60 days of diagnosis by treatment type, stage, and socio-demographic factors: South Australian major public hospitals, 2000-2010 diagnoses\*

	Surgery		Radiotherapy		Chemotherapy		Any treatment (surgical cases only)	
	n=1098	RO (95% CLs)	n=86	RO (95% CLs)	n=898	RO (95% CLs)	n=1098	RO (95% CLs)
<b>Age at diagnosis (years):</b>								
<50 (ref.)	53	1.00	13	1.00	109	1.00	53	1.00
50 - 59	116	1.34 (0.51, 3.51)	14	0.06 (0.00, 1.37)	176	0.94 (0.57, 1.55)	116	0.75 (0.25, 2.21)
60 - 69	226	1.28 (0.51, 3.20)	20	0.17 (0.01, 3.57)	273	1.16 (0.73, 1.84)	226	1.10 (0.41, 2.93)
70 - 79	396	1.10 (0.45, 2.66)	28	0.35 (0.02, 7.07)	292	1.26 (0.80, 2.01)	396	0.99 (0.38, 2.53)
80+	307	1.00 (0.40, 2.47)	11	0.30 (0.01, 7.36)	48	1.60 (0.78, 3.29)	307	1.01 (0.38, 2.65)
<b>Sex:</b>								
Male (ref.)	562	1.00	56	1.00	491	1.00	562	1.00
Female	536	0.83 (0.57, 1.20)	30	1.01 (0.23, 4.35)	407	0.84 (0.64, 1.14)	536	0.94 (0.62, 1.41)
<b>Socioeconomic:</b>								
Low (ref.)	336	1.00	25	1.00	287	1.00	336	1.00
Low-med	273	1.58 (0.93, 2.71)	19	0.40 (0.06, 2.51)	229	0.75 (0.51, 1.10)	273	1.65 (0.92, 2.98)
Med-high	224	1.14 (0.68, 1.94)	20	1.78 (0.26, 12.39)	185	0.86 (0.58, 1.28)	224	1.14 (0.64, 2.04)
High	265	1.19 (0.67, 2.10)	22	1.04 (0.15, 7.27)	197	1.18 (0.78, 1.77)	265	1.41 (0.75, 2.63)
<b>Accessibility:</b>								
High (ref.)	899	1.00	66	1.00	716	1.00	899	1.00
Med-high	141	0.54 (0.20, 1.42)	9	8.99 (0.24, 331.28)	127	1.57 (0.75, 3.30)	141	0.45 (0.16, 1.25)
Poor	58	0.65 (0.21, 1.97)	11	3.90 (0.11, 141.05)	55	0.83 (0.36, 1.93)	58	0.41 (0.12, 1.44)
<b>Local Health Network:</b>								
Northern metro (ref.)	149	1.00	12	1.00	141	1.00	149	1.00
Central metro	421	0.56 (0.32, 0.98)	33	0.16 (0.01, 1.98)	291	0.91 (0.58, 1.43)	421	0.44 (0.24, 0.79)
Southern metro	281	0.46 (0.25, 0.87)	16	0.17 (0.01, 2.26)	252	0.96 (0.61, 1.52)	281	0.29 (0.14, 0.58)
Country South	88	0.87 (0.36, 2.14)	10	0.08 (0.00, 2.02)	83	0.93 (0.43, 2.01)	88	0.87 (0.34, 2.21)
Country North	157	1.04 (0.38, 2.90)	15	0.03 (0.00, 1.61)	131	0.74 (0.33, 1.76)	157	1.23 (0.43, 3.57)
<b>ACPS stage:</b>								
A (ref.)	169	1.00	3	1.00	12	1.00	169	1.00
B	471	1.02 (0.54, 1.91)	20	0.79 (0.03, 23.99)	130	0.43 (0.10, 1.74)	471	0.80 (0.42, 1.53)
C	252	2.34 (1.25, 4.40)	21	0.57 (0.02, 18.97)	409	0.29 (0.07, 1.15)	252	1.54 (0.80, 2.96)
D	180	2.25 (1.16, 4.35)	39	0.94 (0.03, 26.42)	320	0.26 (0.07, 1.03)	180	1.49 (0.74, 2.98)
(UK)	(26)	(1.65 (0.51, 5.33))	(3)	NA	(27)	(0.67 (0.14, 3.26))	(26)	1.35 (0.38, 4.76))
<b>Grade:</b>								
Well diff. (ref.)	38	1.00	5	1.00	18	1.00	38	1.00
Mod diff.	770	0.85 (0.31, 2.29)	53	2.29 (0.31, 16.79)	581	0.97 (0.35, 2.67)	770	0.71 (0.26, 1.92)
Poorly/undiff.	209	0.60 (0.20, 1.78)	19	1.11 (0.12, 10.68)	213	0.94 (0.33, 2.65)	209	0.52 (0.17, 1.58)
(UK)	(81)	(1.84 (0.60, 5.62))	(9)	NA	(86)	(0.40 (0.13, 1.20))	(81)	(1.24 (0.39, 3.93))
<b>Diagnosis year:</b>								
2000 - 2005	541	1.00	52	1.00	451	1.00	541	1.00
2006 - 2010	557	1.26 (0.87, 1.82)	34	0.31 (0.08, 1.25)	447	1.96 (1.48, 2.59)	557	1.29 (0.86, 1.94)

\*Derived from multivariate logistic regression (see "Methods")

RO – Relative odds; CLs – confidence limits; ref. – reference; NA – not applicable; ACPS- Australian Clinico-Pathological Staging; UK – unknown; diff – differentiated; undiff. - undifferentiated.

Table S3: Relative odds (95% CLs) of treatment for **rectal cancer** starting >30 days of diagnosis by treatment type, stage, and socioeconomic factors: South Australian major public hospitals, 2000-2010 diagnoses\*

	Surgery		Radiotherapy		Chemotherapy		All treatment (surgical cases only)	
	n=577	RO (95% CLs)	n=530	RO (95% CLs)	n=658	RO (95% CLs)	n=577	RO (95% CLs)
<b>Age at diagnosis (years):</b>								
<50 (ref.)	38	1.00	66	1.00	80	1.00	38	1.00
50 - 59	94	0.71 (0.31,1.62)	104	1.30 (0.62,2.71)	146	1.73 (0.86,3.48)	94	1.03 (0.46, 2.29)
60 - 69	162	0.57 (0.26,1.24)	168	1.41 (0.71,2.79)	225	1.57 (0.83,2.99)	162	0.78 (0.37, 1.66)
70 - 79	174	0.44 (0.20,0.95)	147	1.35 (0.67,2.71)	177	1.79 (0.90,3.54)	174	0.83 (0.40, 1.76)
80+	109	0.38 (0.17,0.85)	45	1.40 (0.52,3.77)	30	2.01 (0.58,6.97)	109	0.70 (0.32, 1.55)
<b>Sex:</b>								
Male (ref.)	331	1.00	344	1.00	419	1.00	331	1.00
Female	246	0.74 (0.52,1.07)	186	0.68 (0.43,1.07)	239	0.94 (0.61,1.45)	246	0.79 (0.55, 1.14)
<b>Socioeconomic:</b>								
Low (ref.)	208	1.00	181	1.00	220	1.00	208	1.00
Low-med	115	0.86 (0.50,1.45)	118	0.80 (0.42,1.51)	145	1.13 (0.62,2.07)	115	0.81 (0.48, 1.37)
Med-high	121	0.72 (0.44,1.19)	108	0.50 (0.26,0.94)	135	0.78 (0.43,1.42)	121	0.63 (0.38, 1.03)
High	133	1.06 (0.64,1.77)	123	0.88 (0.45,1.70)	158	1.00 (0.55,1.83)	133	1.03 (0.62, 1.72)
<b>Accessibility:</b>								
High (ref.)	454	1.00	409	1.00	507	1.00	454	1.00
Med-high	87	0.74 (0.29,1.88)	85	1.49 (0.50,4.44)	101	1.00 (0.30,3.36)	87	1.27 (0.49, 3.26)
Poor	36	1.00 (0.36,2.76)	36	1.25 (0.37,4.20)	50	0.88 (0.25,3.05)	36	1.58 (0.58, 4.33)
<b>Local Health Network:</b>								
Northern metro (ref.)	93	1.00	94	1.00	107	1.00	93	1.00
Central metro	197	0.55 (0.31,0.97)	169	0.86 (0.44,1.70)	204	1.19 (0.64,2.23)	197	0.61 (0.35, 1.06)
Southern metro	136	0.40 (0.22,0.73)	118	0.61 (0.30,1.23)	174	0.89 (0.47,1.69)	136	0.44 (0.24, 0.80)
Country South	67	0.89 (0.37,2.10)	64	0.45 (0.17,1.25)	76	1.99 (0.62,6.41)	67	0.70 (0.30, 1.63)
Country North	84	0.67 (0.24,1.89)	85	1.48 (0.44,5.02)	97	2.61 (0.73,9.25)	84	0.57 (0.20, 1.62)
<b>ACPS stage:</b>								
A (ref.)	111	1.00	47	1.00	35	1.00	111	1.00
B	183	1.31 (0.79,2.18)	127	0.90 (0.39,2.06)	119	1.35 (0.57,3.21)	183	1.18 (0.71, 1.95)
C	160	1.65 (0.98,2.79)	210	1.39 (0.63,3.10)	287	3.81 (1.64,8.86)	160	1.43 (0.85, 2.40)
D	99	0.83 (0.46,1.51)	123	0.67 (0.30,1.51)	196	1.30 (0.58,2.95)	99	0.79 (0.43, 1.44)
(UK)	24	(0.76 (0.28,2.06))	23	(0.74 (0.23,2.39))	21	(1.72 (0.44,6.71))	24	(0.83 (0.30,2.28))
<b>Grade:</b>								
Well diff. (ref.)	20	1.00	20	1.00	19	1.00	20	1.00
Mod diff.	442	0.60 (0.21,1.68)	376	1.59 (0.57,4.44)	473	1.43 (0.43,4.70)	442	0.78 (0.29, 2.08)
Poorly/undiff.	76	0.52 (0.17,1.61)	80	2.63 (0.81,8.52)	96	2.14 (0.57,8.10)	76	0.71 (0.24, 2.08)
(UK)	39	(1.38 (0.39,4.91))	54	(1.31 (0.40,4.29))	70	(0.72 (0.20,2.63))	39	(1.57 (0.47,5.27))
<b>Diagnosis year:</b>								
2000 - 2005	328	1.00	283	1.00	331	1.00	328	1.00
2006 - 2010	249	2.86 (1.98,4.12)	247	1.76 (1.12,2.76)	327	1.34 (0.88,2.04)	249	3.09 (2.15, 4.43)

\*Derived from multivariate logistic regression (see "Methods")

RO – Relative odds; CLs – confidence limits; ref. – reference; ACPS- Australian Clinico-Pathological Staging; UK – unknown; diff – differentiated; undiff. - undifferentiated.

Table S4: Relative odds (95% CLs) of treatment for **rectal cancer** starting >60 days of diagnosis by treatment type, stage, and socio-demographic factors: South Australian major public hospitals, 2000-2010 diagnoses\*

	Surgery		Radiotherapy		Chemotherapy		All treatment (surgical cases only)	
	n=577	RO (95% CLs)	n=530	RO (95% CLs)	n=658	RO (95% CLs)	n=577	RO (95% CLs)
<b>Age at diagnosis (years):</b>								
<50 (ref.)	38	1.00	66	1.00	80	1.00	38	1.00
50 - 59	94	0.53 (0.23, 1.19)	104	2.41 (1.12, 5.17)	146	2.45 (1.26, 4.74)	94	1.28 (0.42, 3.93)
60 - 69	162	0.49 (0.23, 1.05)	168	3.28 (1.60, 6.71)	225	3.46 (1.85, 6.49)	162	1.17 (0.40, 3.38)
70 - 79	174	0.25 (0.12, 0.55)	147	2.69 (1.30, 5.56)	177	3.47 (1.82, 6.60)	174	1.21 (0.42, 3.48)
80+	109	0.26 (0.11, 0.59)	45	3.05 (1.24, 7.51)	30	3.95 (1.54, 10.17)	109	1.62 (0.55, 4.80)
<b>Sex:</b>								
Male (ref.)	331	1.00	344	1.00	419	1.00	331	1.00
Female	246	0.77 (0.52, 1.13)	186	0.91 (0.61, 1.36)	239	1.04 (0.73, 1.46)	246	0.89 (0.56, 1.42)
<b>Socioeconomic:</b>								
Low (ref.)	208	1.00	181	1.00	220	1.00	208	1.00
Low-med	115	1.29 (0.73, 2.27)	118	1.11 (0.65, 1.92)	145	0.61 (0.38, 0.98)	115	1.05 (0.53, 2.02)
Med-high	121	1.04 (0.61, 1.78)	108	0.95 (0.55, 1.62)	135	0.94 (0.59, 1.50)	121	1.25 (0.67, 2.33)
High	133	1.03 (0.60, 1.77)	123	1.28 (0.74, 2.22)	158	0.71 (0.44, 1.14)	133	0.81 (0.41, 1.58)
<b>Accessibility:</b>								
High (ref.)	454	1.00	409	1.00	507	1.00	454	1.00
Med-high	87	0.26 (0.09, 0.73)	85	1.12 (0.41, 3.01)	101	0.98 (0.42, 2.25)	87	0.49 (0.13, 1.86)
Poor	36	0.30 (0.10, 0.89)	36	1.53 (0.55, 4.31)	50	1.08 (0.45, 2.62)	36	0.83 (0.22, 2.67)
<b>Local Health Network:</b>								
Northern metro (ref.)	93	1.00	94	1.00	107	1.00	93	1.00
Central metro	197	0.53 (0.30, 0.95)	169	0.88 (0.50, 1.55)	204	1.70 (1.00, 2.89)	197	0.71 (0.36, 1.38)
Southern metro	136	0.49 (0.26, 0.91)	118	0.55 (0.30, 1.03)	174	0.84 (0.48, 1.44)	136	0.63 (0.30, 1.30)
Country South	67	0.69 (0.29, 1.61)	64	0.45 (0.18, 1.14)	76	1.36 (0.59, 3.17)	67	0.71 (0.25, 2.05)
Country North	84	1.25 (0.42, 3.74)	85	0.70 (0.24, 2.01)	97	1.10 (0.44, 2.72)	84	0.67 (0.17, 2.71)
<b>ACPS stage:</b>								
A (ref.)	111	1.00	47	1.00	35	1.00	111	1.00
B	183	1.46 (0.82, 2.58)	127	1.26 (0.59, 2.67)	119	1.64 (0.69, 3.91)	183	1.04 (0.53, 2.02)
C	160	2.30 (1.30, 4.05)	210	1.76 (0.86, 3.58)	287	2.70 (1.19, 6.12)	160	1.15 (0.60, 2.24)
D	99	1.34 (0.69, 1.61)	123	1.25 (0.59, 2.67)	196	1.95 (0.85, 4.51)	99	0.83 (0.37, 1.86)
(UK)	24	(1.65 (0.58, 4.67))	23	(0.35 (0.09, 1.43))	21	(1.33 (0.38, 4.68))	24	(1.45 (0.46, 4.58))
<b>Grade:</b>								
Well diff. (ref.)	20	1.00	20	1.00	19	1.00	20	1.00
Mod diff.	442	0.30 (0.11, 0.82)	376	1.25 (0.45, 3.44)	473	1.39 (0.50, 3.88)	442	0.35 (0.13, 0.95)
Poorly/un-diff.	76	0.26 (0.09, 0.79)	80	1.70 (0.57, 5.09)	96	1.51 (0.50, 4.52)	76	0.35 (0.11, 1.12)
(UK)	39	(0.64 (0.19, 2.18))	54	(0.88 (0.28, 2.84))	70	(0.83 (0.27, 2.59))	39	(0.76 (0.23, 2.59))
<b>Diagnosis year:</b>								
2000 - 2005	328	1.00	283	1.00	331	1.00	328	1.00
2006 - 2010	249	1.98 (1.35, 2.91)	247	1.02 (0.70, 1.50)	327	1.21 (0.87, 1.69)	249	2.01 (1.26, 3.18)

\*Derived from multivariate logistic regression (see "Methods")

RO – Relative odds; CLs – confidence limits; ref. – reference; ACPS- Australian Clinico-Pathological Staging; UK – unknown; diff – differentiated; undiff. - undifferentiated.