

Appendix: Table A. Adapted from the 7th edition of the AJCC staging system for gallbladder cancer. [22]

	TX	No description of tumor extent due to incomplete information.	Stage Grouping			
Primary Tumor (T)	T0	No evidence of primary tumor.	Stage 0	Tis	N ₀	M ₀
	Tis	Carcinoma in-situ, confined to epithelium of gallbladder	Stage IA	T ₁	N ₀	M ₀
	T ₁	Invades lamina propria (1a) or muscle layer (muscularis – 1b)	Stage IB	T ₂	N ₀	M ₀
	T ₂	Invades perimuscular connective tissue; no extension beyond serosa or into the liver	Stage IIA	T ₃	N ₀	M ₀
	T ₃	Perforates serosa (visceral peritoneum) and/or directly invades the liver and/or one adjacent organ or structure, such as stomach, duodenum, pancreas, colon or extra-hepatic bile ducts	Stage IIB	T ₁	N ₁	M ₀
	T ₄	Invades main portal vein or hepatic artery/invades multiple extra-hepatic organs or structures.		T ₂	N ₁	M ₀
	Regional Lymph Nodes (N)	N _x		No regional lymph node metastasis	T ₃	N ₁
N ₀		No regional lymph node metastasis				
N ₁		Regional lymph node metastasis				
N ₂		Non-Regional lymph node metastasis				
Distant Metastases (M)	M ₀	No distant metastasis	Stage III	T ₄	Any N	M ₀
	M ₁	Distant Metastasis	Stage IV	Any T	Any N	M ₁

APPENDIX TABLE 1. CARCINOMA IN-SITU. Demographic Characteristics of Patients With In-Situ Gallbladder Cancer cases by Decade (18 Surveillance, Epidemiology, and End Results Registries, 1973-2010)

Patient Characteristics		No. of Patients (%)				
		All Patients, N=686	1973-1982, N=67	1983-1992, N=118	1993-2002, N=198	2003-2010, N=303
Sex	Male	214 (31.20)	25 (37.31)	29 (24.58)	56 (28.28)	104 (34.32)
	Female	472 (68.80)	42 (62.69)	89 (75.42)	142 (71.72)	199 (65.68)
Race	Non-Hispanic White	404 (58.89)	45 (67.16)	79 (66.95)	112 (56.57)	168 (55.45)
	Non-Hispanic Black	48 (7.00)	5 (7.46)	7 (5.93)	16 (8.08)	20 (6.60)
	Hispanic	150 (21.87)	9 (13.43)	17 (14.41)	50 (25.25)	74 (24.42)
	Other ^a	84 (12.24)	8 (11.94)	15 (12.71)	20 (10.10)	41 (13.53)
Age, years	<50	108 (15.74)	11 (16.42)	13 (11.02)	33 (16.67)	51 (16.83)
	50-59	101 (14.72)	12 (17.91)	15 (12.71)	30 (15.15)	44 (14.52)
	60-69	144 (20.99)	13 (19.40)	27 (22.88)	42 (21.21)	62 (20.46)
	70-79	180 (26.24)	13 (19.40)	37 (31.36)	52 (26.26)	78 (25.74)
	80+	153 (22.30)	18 (26.87)	26 (22.03)	41 (20.71)	68 (22.44)
Marital Status*	Married	324 (49.77)	33 (50.77)	60 (54.54)	96 (50.79)	135 (47.04)
	Single	83 (12.75)	3 (4.62)	7 (6.36)	22 (11.64)	51 (27.27)
	Other ^b	244 (37.48)	29 (44.61)	43 (39.10)	71 (37.57)	101 (35.19)
Geographic Region	Atlantic	112 (16.33)	9 (13.43)	14 (11.86)	25 (12.63)	64 (21.12)
	Pacific/West	393 (57.29)	39 (58.21)	64 (54.24)	128 (64.65)	162 (53.47)
	MidWest	125 (18.22)	17 (25.37)	33 (27.97)	27 (13.64)	48 (15.84)
	South	56 (8.16)	2 (2.99)	7 (5.93)	18 (9.09)	29 (9.57)
Grade	Well Differentiated	69 (10.06)	4 (5.97)	16 (13.56)	21 (10.61)	28 (9.24)
	Moderately Differentiated	17 (2.47)	1 (1.49)	0 (0.00)	6 (3.03)	10 (3.30)
	Poorly Differentiated	5 (0.73)	0 (0.00)	0 (0.00)	2 (1.01)	3 (0.99)
	Undifferentiated	17 (2.47)	0 (0.00)	0 (0.00)	6 (3.03)	11 (3.63)
	Unknown	578 (84.27)	62 (92.54)	102 (86.44)	163 (82.32)	251 (82.84)
Surgery	Yes	445 (64.87)	67 (100.00)	117 (99.15)	197 (99.49)	64 (21.12)
	No	241 (35.13)	0 (0.00)	1 (0.85)	1 (0.51)	239 (78.88)
Vital status	Alive	378 (55.10)	16 (23.88)	32 (27.12)	94 (47.47)	236 (77.89)
	Death due to Gallbladder Cancer	15 (2.19)	2 (2.99)	2 (1.69)	7 (3.54)	4 (1.32)
	Death due to Pancreatic or Biliary cancer	25 (3.64)	4 (5.97)	4 (2.29)	9 (4.55)	8 (2.64)
	Death due to Other causes	268 (39.07)	45 (67.16)	80 (67.80)	88 (44.44)	55 (18.15)

^a Other races included Asian or Pacific Islander, American Indian, Alaska Native, or unspecified.

^b Other Marital Status included Divorced, Widowed, Separated.

* All unspecified or missing cases were excluded (N=651)

**APPENDIX TABLE 2. LOCALIZED. Demographic Characteristics of Patients With Localized Gallbladder Cancer cases by Decade
(18 Surveillance, Epidemiology, and End Results Registries, 1973-2010)**

Patient Characteristics		No. of Patients (%)				
		All Patients, N=4725	1973-1982, N=603	1983-1992, N=756	1993-2002, N=1426	2003-2010, N=1940
Sex	Male	1250 (26.46)	141 (23.38)	208 (27.51)	369 (25.88)	532 (27.43)
	Female	3475 (73.55)	462 (76.62)	548 (72.49)	1057 (74.12)	1408 (72.58)
Race	Non-Hispanic White	2914 (61.67)	465 (77.11)	552 (73.02)	844 (59.19)	1053 (54.28)
	Non-Hispanic Black	395 (8.36)	31 (5.14)	46 (6.08)	105 (7.36)	213 (10.98)
	Hispanic	876 (18.54)	60 (9.95)	83 (10.98)	296 (2.08)	437 (22.53)
	Other ^a	540 (11.43)	47 (7.79)	75 (9.92)	181 (12.69)	237 (12.22)
Age, years	<50	296 (6.26)	29 (4.81)	27 (3.57)	103 (7.22)	137 (7.06)
	50-59	55 (1.16)	64 (10.61)	88 (11.64)	162 (11.36)	241 (12.42)
	60-69	1007 (21.31)	143 (23.71)	159 (21.03)	302 (21.18)	403 (20.77)
	70-79	1429 (30.24)	194 (32.17)	250 (33.07)	432 (30.29)	553 (28.51)
	80+	1438 (30.43)	173 (28.69)	232 (30.69)	427 (29.94)	606 (31.24)
Marital Status*	Married	2195 (48.79)	267 (46.03)	341 (46.84)	681 (50.22)	906 (49.37)
	Single	476 (10.58)	32 (5.52)	51 (7.01)	151 (11.14)	242 (13.19)
	Other ^b	1828 (40.63)	281 (48.45)	336 (46.15)	524 (38.64)	687 (37.44)
Geographic Region	Atlantic	767 (16.23)	99 (16.42)	97 (12.83)	213 (14.93)	358 (18.45)
	Pacific/West	2425 (51.32)	255 (42.29)	356 (47.09)	791 (55.47)	1023 (52.73)
	MidWest	1066 (22.56)	228 (37.81)	262 (34.66)	297 (20.83)	279 (14.83)
	South	467 (9.88)	21 (3.48)	41 (5.42)	125 (8.77)	280 (14.43)
Grade	Well Differentiated	964 (20.40)	130 (21.56)	181 (23.94)	259 (18.16)	394 (20.31)
	Moderately Differentiated	1682 (35.60)	104 (17.25)	233 (30.82)	581 (40.74)	764 (39.38)
	Poorly Differentiated	1064 (22.52)	97 (16.09)	147 (19.45)	370 (25.95)	450 (23.20)
	Undifferentiated	79 (1.67)	11 (1.82)	14 (1.85)	24 (1.68)	30 (1.55)
	Unknown	936 (19.81)	261 (43.28)	181 (23.94)	192 (13.47)	302 (15.56)
Surgery	Yes	3282 (69.46)	598 (99.17)	748 (98.94)	1394 (97.76)	542 (27.94)
	No	1443 (30.54)	5 (0.83)	8 (1.06)	32 (2.24)	1398 (72.06)
Vital status	Alive	1299 (27.49)	20 (3.32)	58 (7.67)	288 (20.20)	933 (48.09)
	Death due to Gallbladder Cancer	1575 (33.33)	267 (44.28)	302 (39.95)	527 (36.96)	479 (24.69)
	Death due to Pancreatic or Biliary cancer	415 (8.78)	48 (7.96)	63 (8.33)	150 (10.52)	154 (7.94)
	Death due to Other causes	1436 (30.40)	268 (44.44)	333 (44.05)	461 (32.32)	374 (19.28)

a Other races included Asian or Pacific Islander, American Indian, Alaska Native, or unspecified.

b Other Marital Status included Divorced, Widowed, Separated.

*** All unspecified or missing cases were excluded (N=4499)**

**APPENDIX TABLE 3. REGIONAL. Demographic Characteristics of Patients With Regional Gallbladder Cancer cases by Decade
(18 Surveillance, Epidemiology, and End Results Registries, 1973-2010)**

Patient Characteristics	No. of Patients (%)				
	All Patients, N=4671	1973-1982, N=880	1983-1992, N=849	1993-2002, N=1464	2003-2010, N=1478
Sex					
Male	1324 (28.35)	241 (27.39)	210 (24.73)	423 (28.89)	450 (30.45)
Female	3347 (71.65)	639 (72.61)	639 (75.27)	1041 (71.11)	1028 (69.55)
Race					
Non-Hispanic White	3018 (64.61)	717 (81.48)	592 (69.73)	851 (58.13)	858 (58.05)
Non-Hispanic Black	368 (7.88)	38 (4.32)	45 (5.30)	117 (7.99)	168 (11.37)
Hispanic	802 (17.17)	74 (8.41)	100 (11.78)	319 (21.79)	309 (20.91)
Other ^a	483 (10.34)	51 (5.79)	112 (13.19)	177 (12.09)	143 (9.68)
Age, years					
<50	282 (6.04)	23 (2.61)	45 (5.30)	115 (7.86)	99 (6.70)
50-59	630 (13.49)	112 (12.73)	94 (11.07)	186 (12.70)	238 (16.10)
60-69	1079 (23.10)	215 (24.43)	201 (23.67)	311 (21.24)	352 (23.82)
70-79	1516 (32.46)	301 (34.20)	292 (34.39)	514 (35.11)	409 (27.67)
80+	1164 (24.92)	229 (26.02)	217 (25.56)	338 (23.09)	380 (25.71)
Marital Status*					
Married	1164 (33.50)	229 (33.14)	217 (33.65)	338 (32.19)	380 (34.90)
Single	468 (13.47)	65 (9.41)	58 (8.99)	169 (16.10)	176 (16.16)
Other ^b	1843 (53.03)	397 (57.45)	370 (57.36)	543 (51.71)	533 (48.94)
Geographic Region					
Atlantic	787 (16.85)	172 (19.55)	115 (13.55)	218 (14.89)	282 (19.08)
Pacific/West	2460 (52.67)	355 (40.34)	451 (53.12)	884 (60.38)	770 (52.10)
MidWest	1029 (22.03)	326 (37.05)	252 (29.68)	230 (15.71)	221 (14.96)
South	395 (8.46)	27 (3.06)	31 (3.65)	132 (9.02)	205 (13.87)
Grade					
Well Differentiated	374 (8.00)	82 (9.32)	72 (8.48)	114 (7.78)	106 (7.17)
Moderately Differentiated	1192 (25.52)	118 (13.41)	229 (26.97)	397 (27.12)	448 (30.31)
Poorly Differentiated	1633 (34.96)	213 (24.20)	300 (35.34)	569 (38.87)	551 (37.28)
Undifferentiated	147 (3.15)	43 (4.89)	25 (2.94)	43 (2.94)	36 (2.44)
Unknown	1325 (28.37)	424 (48.18)	223 (26.27)	341 (23.29)	337 (22.80)
Surgery					
Yes	3371 (72.17)	867 (98.52)	781 (91.99)	1071 (73.16)	652 (44.11)
No	1300 (27.83)	13 (1.48)	68 (8.01)	393 (26.84)	826 (55.89)
Vital status					
Alive	379 (8.11)	3 (0.34)	19 (2.24)	77 (5.26)	280 (18.94)
Death due to Gallbladder Cancer	2715 (58.12)	646 (73.41)	553 (65.13)	859 (58.67)	657 (44.45)
Death due to Pancreatic or Biliary cancer	790 (16.91)	107 (12.16)	144 (16.96)	251 (17.14)	288 (19.49)
Death due to Other causes	787 (16.85)	124 (14.09)	133 (15.67)	277 (18.92)	253 (17.12)

a Other races included Asian or Pacific Islander, American Indian, Alaska Native, or unspecified.

b Other Marital Status included Divorced, Widowed, Separated.

* All unspecified or missing cases were excluded (N=3475)

**APPENDIX TABLE 4. DISTANT. Demographic Characteristics of Patients With Distant Gallbladder Cancer cases by Decade
(18 Surveillance, Epidemiology, and End Results Registries, 1973-2010)**

Patient Characteristics	No. of Patients (%)				
	All Patients, N=6402	1973-1982, N=1091	1983-1992, N=1057	1993-2002, N=1598	2003-2010, N=2656
Sex					
Male	1790 (27.96)	310 (28.41)	285 (26.96)	423 (26.47)	772 (29.07)
Female	4612 (72.04)	781 (71.59)	772 (73.04)	1175 (73.53)	1884 (70.93)
Race					
Non-Hispanic White	4109 (64.18)	870 (79.74)	813 (76.92)	950 (59.45)	1476 (55.57)
Non-Hispanic Black	604 (9.43)	51 (4.67)	73 (6.91)	157 (9.82)	323 (12.16)
Hispanic	1061 (16.57)	88 (8.07)	83 (7.85)	329 (20.59)	561 (21.12)
Other ^a	628 (9.81)	82 (7.52)	88 (8.32)	162 (10.14)	296 (11.15)
Age, years					
<50	446 (6.97)	39 (3.57)	40 (3.78)	129 (8.07)	238 (8.96)
50-59	907 (14.17)	119 (10.91)	120 (11.35)	210 (13.14)	458 (17.24)
60-69	1611 (25.16)	274 (25.11)	273 (25.83)	397 (24.84)	667 (25.12)
70-79	1967 (30.72)	387 (35.47)	366 (34.63)	503 (31.48)	711 (26.77)
80+	1471 (22.98)	272 (24.93)	258 (24.41)	359 (22.47)	582 (21.91)
Marital Status*					
Married	1471 (21.08)	272 (21.60)	258 (21.59)	359 (21.01)	582 (20.67)
Single	3093 (44.32)	501 (39.80)	502 (42.01)	740 (43.30)	1350 (47.94)
Other ^b	2415 (34.60)	486 (38.60)	435 (36.40)	610 (35.69)	884 (31.39)
Geographic Region					
Atlantic	1054 (16.46)	175 (16.04)	169 (15.99)	197 (12.33)	513 (19.31)
Pacific/West	3271 (51.09)	453 (41.52)	424 (40.11)	947 (59.26)	1447 (54.48)
MidWest	1574 (24.59)	439 (40.24)	423 (40.02)	349 (21.84)	363 (13.67)
South	503 (7.86)	24 (2.20)	41 (3.88)	105 (6.57)	333 (12.54)
Grade					
Well Differentiated	315 (4.92)	83 (7.61)	70 (6.62)	64 (4.01)	98 (3.69)
Moderately Differentiated	1141 (17.82)	107 (9.81)	214 (20.25)	323 (20.21)	497 (18.71)
Poorly Differentiated	1971 (30.79)	245 (22.46)	354 (33.49)	578 (36.17)	794 (29.90)
Undifferentiated	237 (3.70)	69 (6.32)	45 (4.26)	56 (3.50)	67 (2.52)
Unknown	2738 (42.77)	587 (53.80)	374 (35.38)	577 (36.11)	1200 (45.18)
Surgery					
Yes	3298 (51.51)	1050 (96.24)	914 (86.47)	830 (51.94)	504 (18.98)
No	3104 (48.49)	41 (3.76)	143 (13.53)	768 (48.06)	2152 (81.02)
Vital status					
Alive	384 (6.00)	0 (0.00)	9 (0.85)	37 (2.32)	338 (12.72)
Death due to Gallbladder Cancer	3777 (59.00)	768 (70.40)	722 (68.31)	966 (60.45)	1321 (49.74)
Death due to Pancreatic or Biliary cancer	1081 (16.89)	105 (9.62)	130 (12.30)	283 (17.71)	563 (21.20)
Death due to Other causes	1160 (18.11)	218 (19.98)	196 (18.54)	312 (19.52)	434 (16.34)

a Other races included Asian or Pacific Islander, American Indian, Alaska Native, or unspecified.

b Other Marital Status included Divorced, Widowed, Separated.

* All unspecified or missing cases were excluded (N=6979)

APPENDIX TABLE 5. UNSTAGED. Demographic Characteristics of Patients With Distant Gallbladder Cancer cases by Decade (18 Surveillance, Epidemiology, and End Results Registries, 1973-2010)

Patient Characteristics	No. of Patients (%)				
	All Patients, N=957	1973-1982, N=166	1983-1992, N=149	1993-2002, N=293	2003-2010, N=349
Sex					
Male	321 (33.54)	55 (33.13)	46 (30.87)	106 (36.18)	114 (32.66)
Female	636 (66.46)	111 (66.87)	103 (69.13)	187 (63.82)	235 (67.34)
Race					
Non-Hispanic White	655 (68.44)	134 (80.72)	113 (75.84)	178 (60.75)	230 (65.90)
Non-Hispanic Black	82 (8.57)	4 (2.41)	12 (8.05)	27 (9.21)	39 (11.17)
Hispanic	117 (12.23)	21 (12.65)	11 (7.38)	44 (15.02)	41 (11.76)
Other ^a	103 (10.76)	7 (4.22)	13 (8.73)	44 (15.02)	39 (11.17)
Age, years					
<50	29 (3.03)	3 (1.81)	5 (3.36)	10 (3.41)	11 (3.15)
50-59	85 (8.88)	18 (10.84)	8 (5.37)	21 (7.17)	38 (10.89)
60-69	163 (17.03)	30 (18.07)	29 (19.46)	49 (16.72)	55 (15.76)
70-79	243 (25.40)	56 (33.74)	40 (26.84)	75 (25.60)	72 (20.63)
80+	437 (45.66)	59 (35.54)	67 (44.97)	138 (47.10)	173 (49.67)
Marital Status*					
Married	331 (37.40)	66 (42.04)	51 (35.66)	100 (38.02)	114 (35.40)
Single	96 (10.85)	11 (7.01)	14 (9.79)	25 (9.51)	46 (14.29)
Other ^b	458 (51.75)	80 (50.95)	78 (54.55)	138 (52.47)	162 (50.31)
Geographic Region					
Atlantic	215 (22.47)	19 (11.45)	39 (26.17)	67 (22.87)	90 (25.79)
Pacific/West	452 (47.23)	82 (49.40)	55 (36.92)	158 (36.92)	157 (44.98)
MidWest	214 (22.36)	63 (37.95)	51 (34.23)	47 (34.23)	53 (15.19)
South	76 (7.94)	2 (1.20)	4 (2.68)	21 (2.68)	49 (14.04)
Grade					
Well Differentiated	25 (2.61)	5 (3.01)	7 (4.70)	8 (2.73)	5 (1.43)
Moderately Differentiated	44 (4.60)	11 (6.63)	11 (7.38)	9 (3.07)	13 (3.73)
Poorly Differentiated	80 (8.36)	20 (12.05)	18 (12.08)	25 (8.54)	17 (4.87)
Undifferentiated	9 (0.94)	4 (2.41)	3 (2.01)	2 (0.68)	0 (0.00)
Unknown	799 (83.49)	126 (75.90)	110 (73.83)	249 (84.98)	314 (89.97)
Surgery					
Yes	501 (52.35)	164 (98.80)	114 (76.51)	129 (44.03)	94 (26.93)
No	456 (47.65)	2 (1.20)	35 (23.49)	164 (55.97)	255 (73.07)
Vital status					
Alive	50 (5.22)	2 (1.20)	1 (0.67)	15 (5.12)	32 (9.17)
Death due to Gallbladder Cancer	591 (61.76)	120 (72.30)	99 (66.44)	169 (57.68)	203 (58.17)
Death due to Pancreatic or Biliary cancer	121 (12.64)	10 (6.02)	15 (10.07)	42 (14.33)	54 (15.47)
Death due to Other causes	195 (20.38)	34 (20.48)	34 (22.82)	67 (22.87)	60 (17.19)

^a Other races included Asian or Pacific Islander, American Indian, Alaska Native, or unspecified.

^b Other Marital Status included Divorced, Widowed, Separated.

* All unspecified or missing cases were excluded (N=885)

Appendix: Table 6. The Histopathologic characteristics of Gallbladder Tumors for each Stage by Year of Diagnosis

Stage: In-Situ		No. of Patients (%)				
Histopathologic Characteristics	All Patients, N=686	1973-1982, N=67	1983-1992, N=118	1993-2002, N=198	2003-2010, N=303	
Non-papillary features ^a	535 (77.99)	60 (89.55)	92 (77.97)	167 (84.34)	216 (71.29)	
Papillary features ^b	148 (21.57)	7 (10.45)	26 (22.03)	29 (14.65)	86 (28.38)	
Squamous features ^c	2 (0.29)	0 (0.00)	0 (0.00)	2 (1.01)	0 (0.00)	
Neuroendocrine features ^d	1 (0.15)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.33)	
Other ^e	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	
Stage: Localized		No. of Patients (%)				
Histopathologic Characteristics	All Patients, N=4725	1973-1982, N=603	1983-1992, N=756	1993-2002, N=1426	2003-2010, N=1940	
Non-papillary features ^a	3871 (81.93)	477 (79.10)	631 (83.47)	1193 (83.66)	1570 (80.93)	
Papillary features ^b	582 (12.32)	101 (16.75)	87 (11.51)	152 (10.66)	242 (12.47)	
Squamous features ^c	258 (5.46)	22 (3.65)	33 (4.37)	36 (2.52)	52 (2.68)	
Neuroendocrine features ^d	101 (2.14)	0 (0.00)	2 (0.26)	37 (2.59)	62 (3.20)	
Other ^e	28 (0.59)	3 (0.50)	3 (0.40)	8 (0.56)	14 (0.72)	
Stage: Regional		No. of Patients (%)				
Histopathologic Characteristics	All Patients, N=4671	1973-1982, N=880	1983-1992, N=849	1993-2002, N=1464	2003-2010, N=1478	
Non-papillary features ^a	4161 (89.08)	793 (90.11)	763 (89.87)	1294 (88.39)	1311 (88.70)	
Papillary features ^b	125 (2.68)	24 (2.73)	25 (2.94)	41 (2.80)	35 (2.37)	
Squamous features ^c	143 (3.06)	53 (6.02)	52 (6.12)	81 (5.53)	72 (4.87)	
Neuroendocrine features ^d	66 (1.41)	4 (0.45)	5 (0.59)	21 (1.43)	36 (2.44)	
Other ^e	61 (1.31)	6 (0.68)	4 (0.47)	27 (1.84)	24 (1.62)	
Stage: Distant		No. of Patients (%)				
Histopathologic Characteristics	All Patients, N=6402	1973-1982, N=1145	1983-1992, N=1057	1993-2002, N=1598	2003-2010, N=2656	
Non-papillary features ^a	5827 (91.02)	1006 (87.86)	973 (92.05)	1462 (91.49)	2386 (89.83)	
Papillary features ^b	116 (1.81)	28 (2.45)	23 (2.18)	23 (1.44)	42 (1.58)	
Squamous features ^c	231 (3.61)	42 (3.67)	39 (3.69)	60 (3.75)	90 (3.39)	
Neuroendocrine features ^d	101 (1.58)	6 (0.52)	10 (0.95)	19 (1.19)	66 (2.48)	
Other ^e	127 (1.98)	9 (0.79)	12 (1.14)	34 (2.13)	72 (2.71)	
Stage: Unstaged		No. of Patients (%)				
Histopathologic Characteristics	All Patients, N=957	1973-1982, N=166	1983-1992, N=149	1993-2002, N=293	2003-2010, N=367	
Non-papillary features ^a	672 (70.23)	146 (87.95)	128 (85.91)	205 (69.97)	193 (52.59)	
Papillary features ^b	5 (0.52)	1 (0.60)	3 (2.01)	1 (0.34)	0 (0.00)	
Squamous features ^c	23 (2.40)	9 (5.42)	4 (2.68)	8 (2.73)	2 (0.54)	
Neuroendocrine features ^d	9 (0.94)	1 (0.60)	3 (2.01)	1 (0.34)	4 (1.09)	
Other ^e	248 (25.91)	9 (5.42)	11 (7.38)	78 (26.62)	150 (40.87)	

a Non-papillary: Adenocarcinoma, Carcinoma NOS with non-papillary features

b Papillary: Carcinoma arising from pre-invasive lesions, adenoma, with papillary features

c Squamous: Squamous cell carcinoma and adenosquamous carcinomas

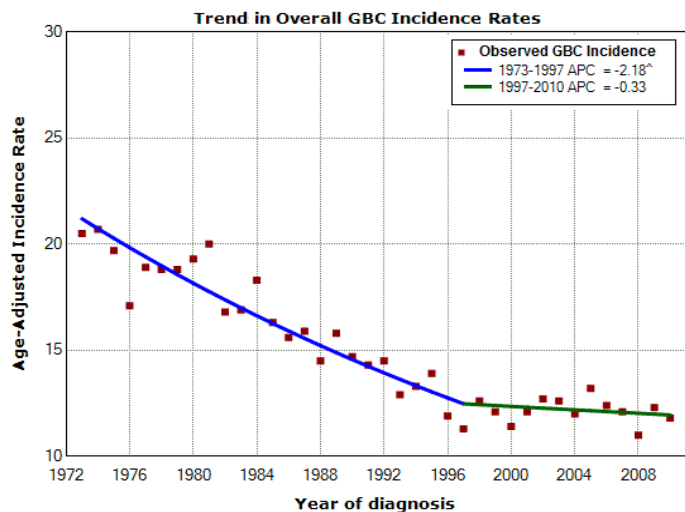
d Neuroendocrine tumors

e Other: other malignant carcinomas and sarcomas

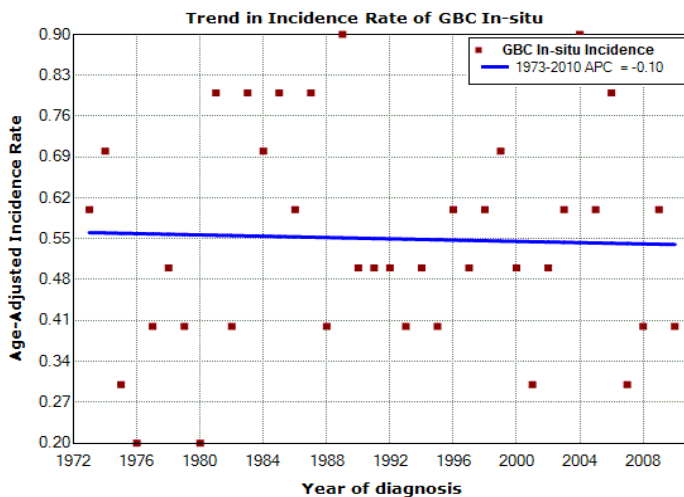
Appendix, Table 7. Cox Multivariate Regression parameters for GBC In-situ Cases (1973-2010)

Covariate	Hazard Ratio (HR)	95% CI for HR		
		Lower	Upper	
10-Year survival regression parameters				
Age^a				
	50-59	2	0.84	4.76
	60-69	4.39	1.06	9.37
	70-79	8.51	4.11	17.61
	80+	14	6.79	28.89
Female Sex^b		0.71	0.54	0.92
Papillary (Tumoral) Histology^c		0.95	0.67	1.34
5-Year survival regression parameters				
Age^a				
	50-59	2.7	0.02	8.6
	60-69	5.47	0.09	15.65
	70-79	10.79	0.22	29.67
	80+	15.84	5.77	43.5
Female Sex^b		0.7	0.51	0.96
Papillary (Tumoral) Histology^c		0.84	0.57	1.27
Reference groups:				
a: Ages <50 years				
b: Male sex				
c: Non-papillary (flat) histology				

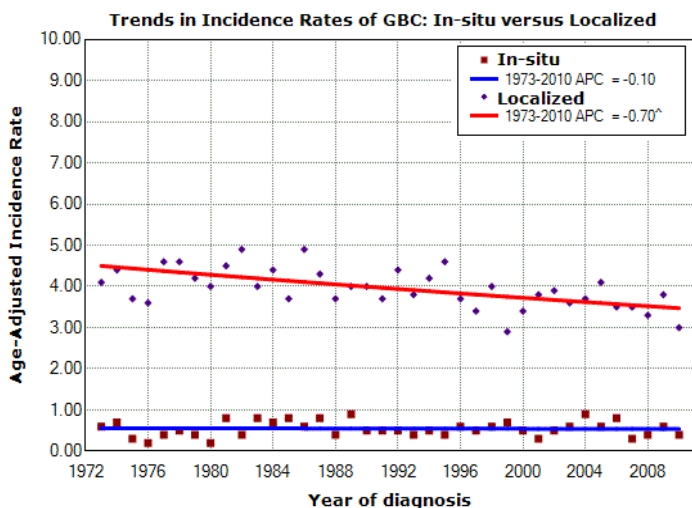
Appendix: Figure 1 (A-F). Trends in Observed Incidence of GBC Tumors by Stage (1973-2010)



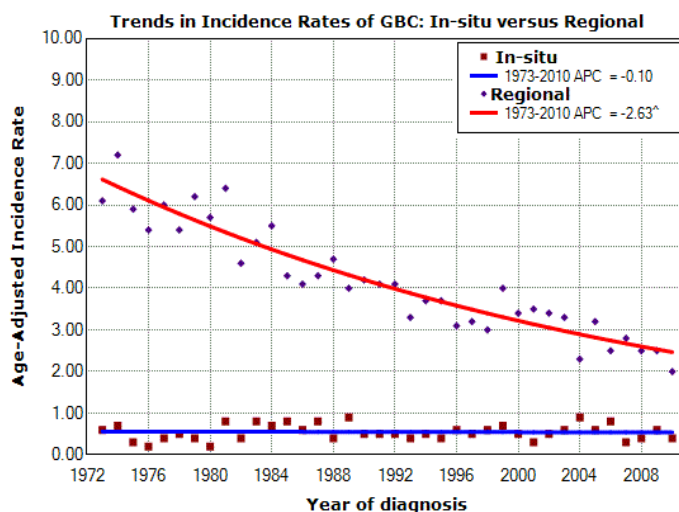
A. Trends in Overall GBC Incidence



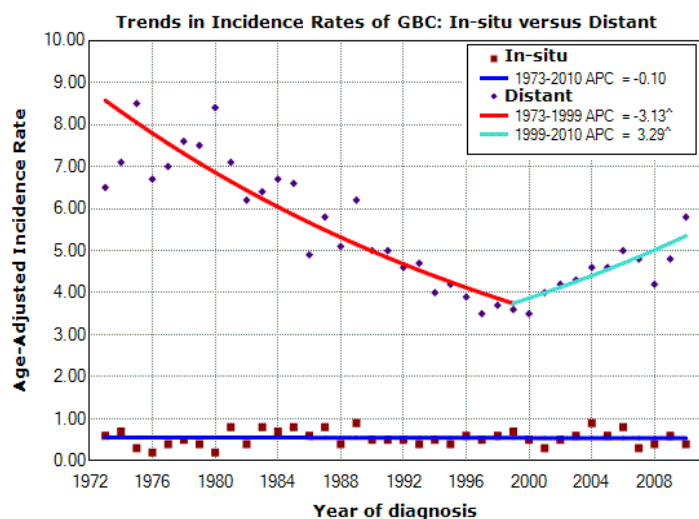
B. Trends in Overall GB-CIS Incidence



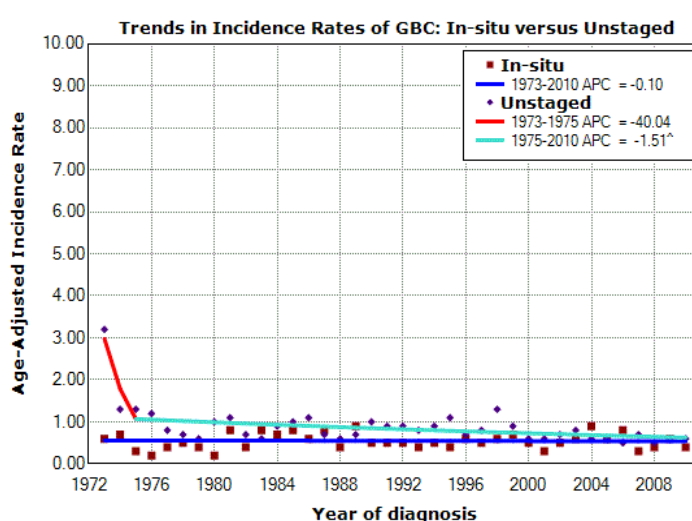
C. Trends in Overall GB-CIS and Localized stages



D. Trends in Overall GB-CIS and Regional stages

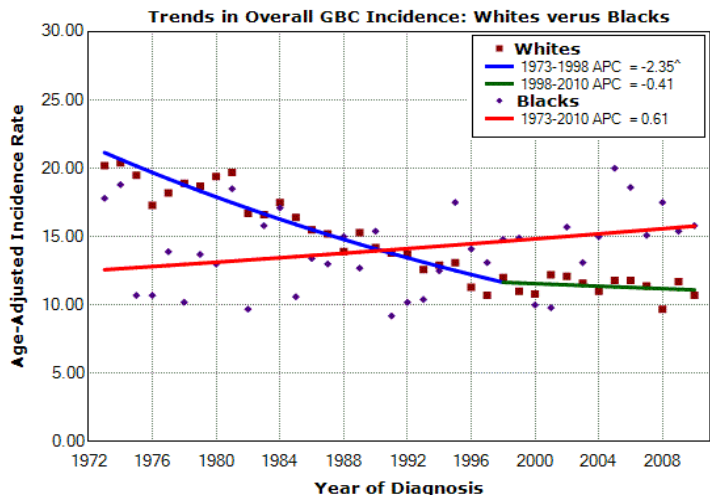


E. Trends in Overall GB-CIS and Distant stages

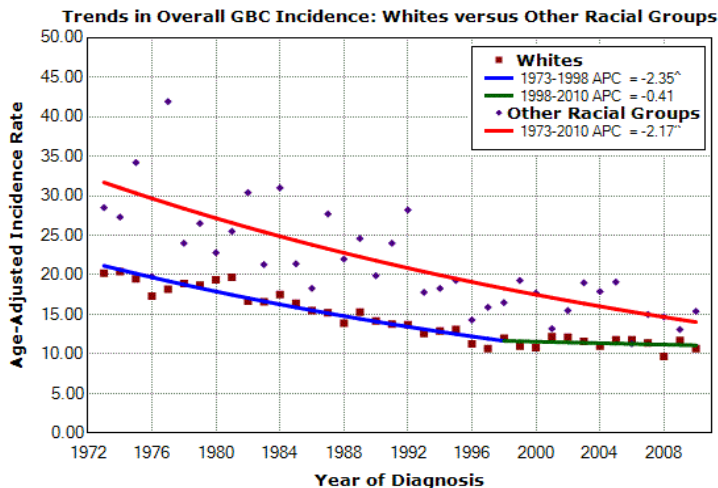


F. Trends in Overall Unstaged and GB-CIS stages

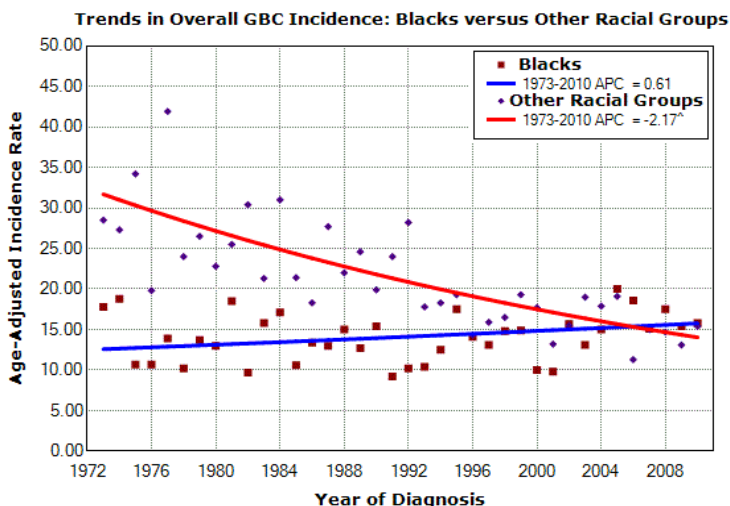
Appendix: Figure 2 (A-F). Trends in Observed Incidence of GBC Tumors by Race & Gender (1973-2010)



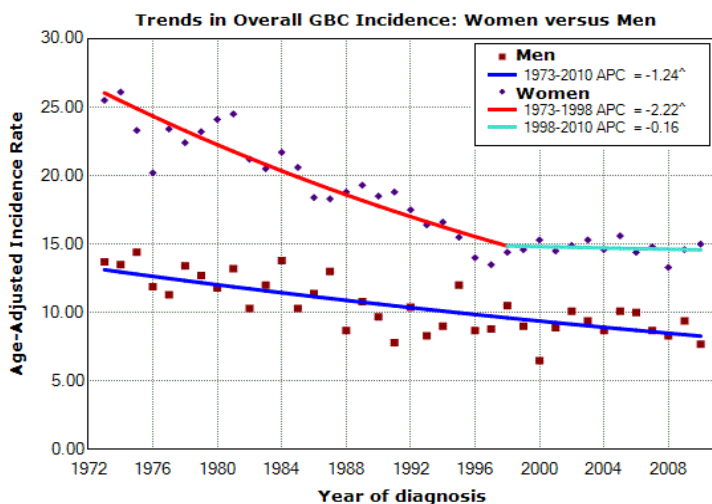
A. GBC Incidence among Whites vs. Blacks



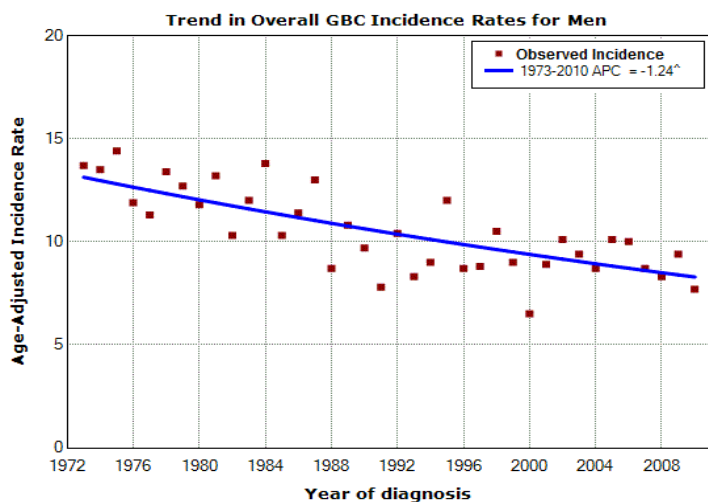
B. GBC Incidence among Whites vs. Other groups



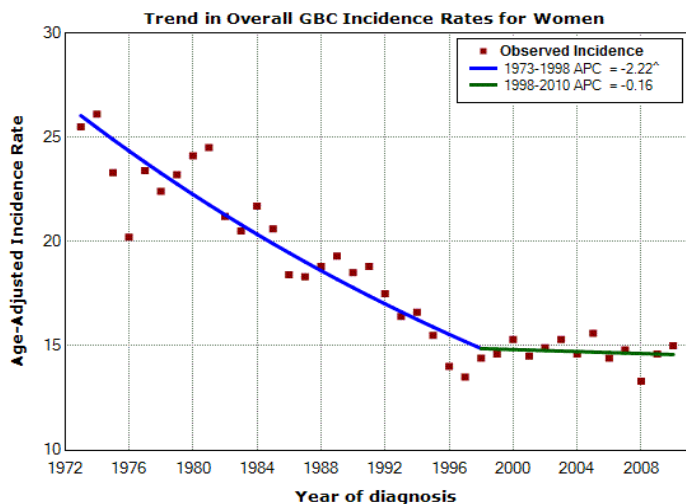
C. GBC Incidence among Blacks vs. Other groups



D. GBC Incidence by Gender groups

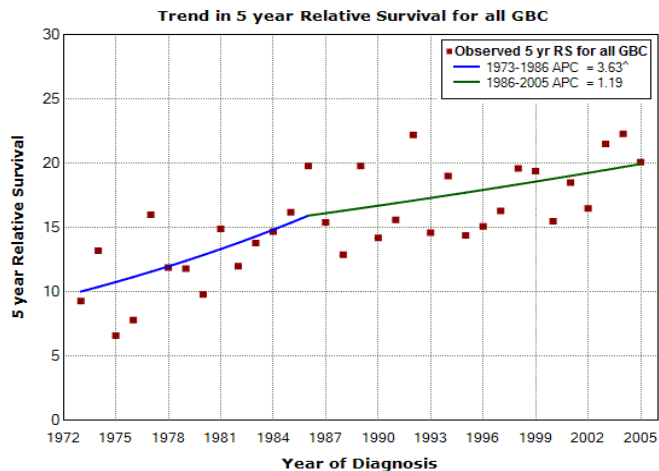


E. Overall GBC Incidence of men



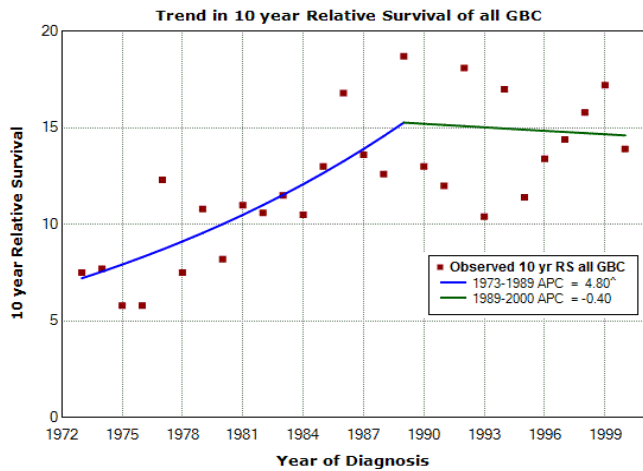
F. Overall GBC Incidence of women

Appendix: Figure 3 (A-F). Trends in 5 and 10-year Relative Survival (RS) for all GBC and GB-CIS Tumors (1973-2010)



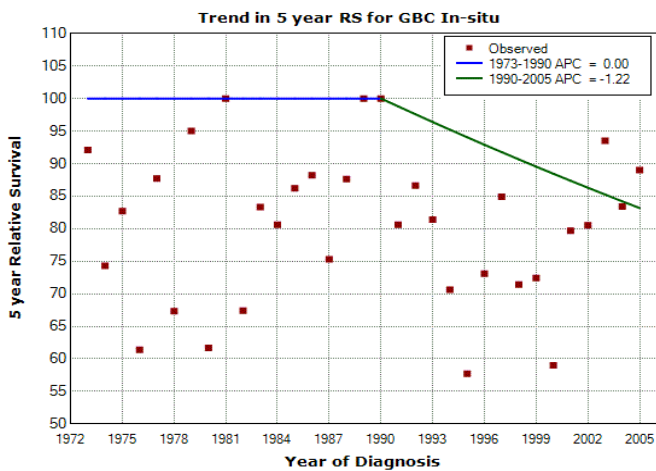
[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

A. 5-year RS for all GBC Tumors



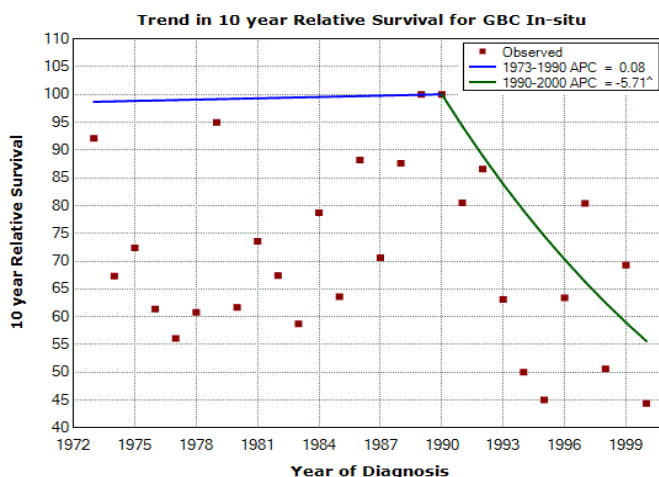
[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

B. 10-year RS for all GBC Tumors



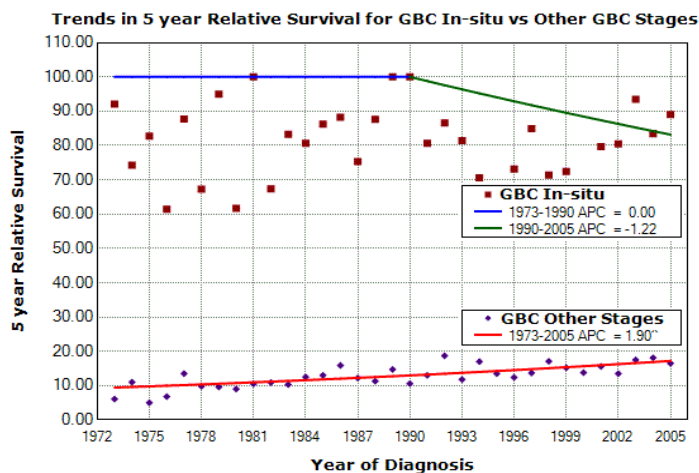
[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

C. 5-year RS for GB-CIS Tumors



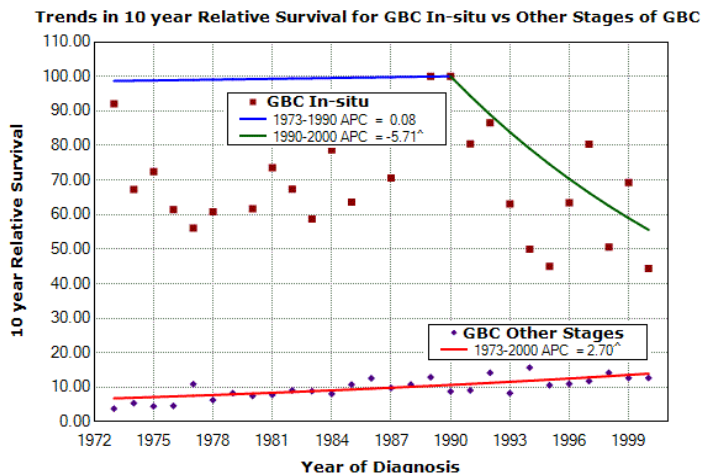
[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

D. 10-year RS for GB-CIS Tumors



[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

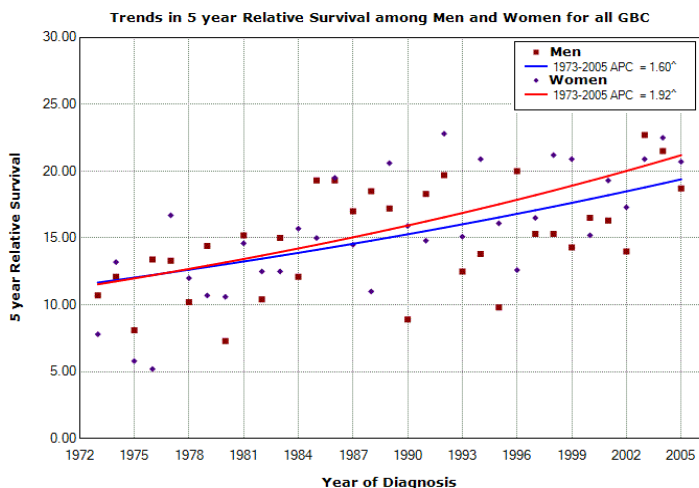
E. 5-year RS for GB and GB-CIS Tumors



[^] The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

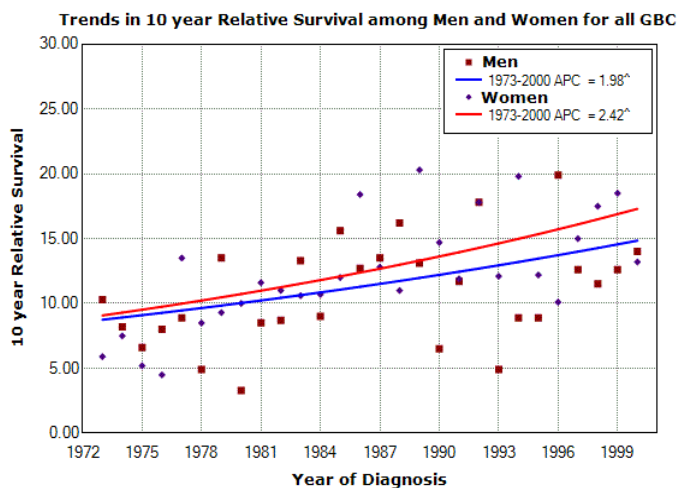
F. 10-year RS for GB and GB-CIS Tumors

Appendix: Figure 4 (A-F). Trends in 5 & 10-year Relative Survival (RS) of GBC by Gender & Race/ethnicity (1973-2010)



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

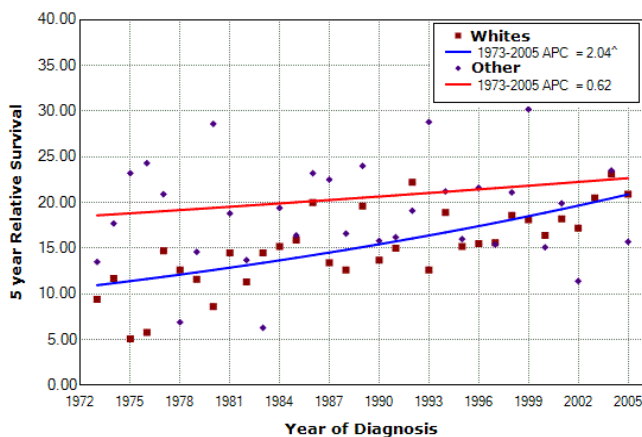
A. Trends in 5-year Relative Survival by Gender



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

B. Trends in 10-year Relative Survival by Gender

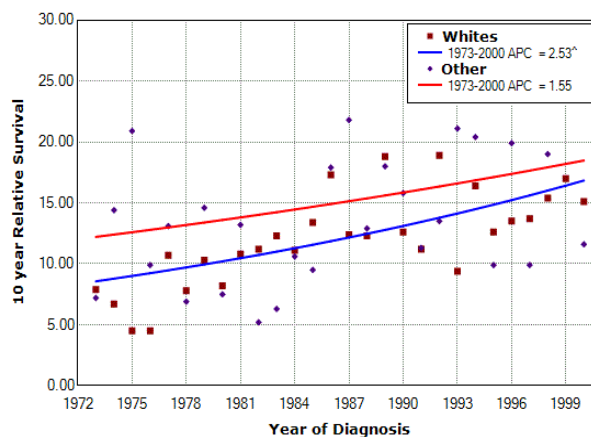
Trends in 5 year Relative Survival among Whites and Other Racial groups for all GBC



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

C. Trends in 5-year RS for Whites & Other Races

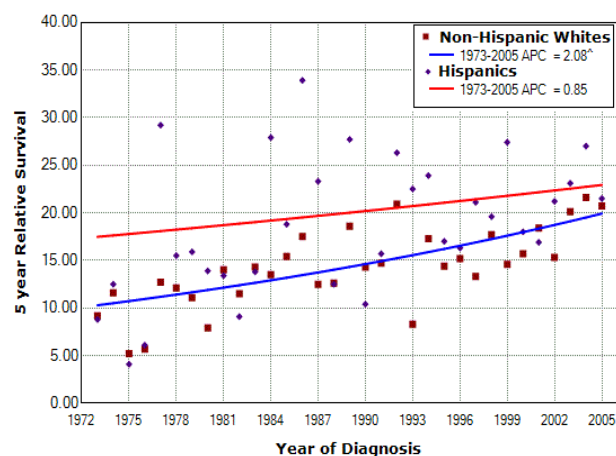
Trends in 10 year Relative Survival among Whites and Other Racial groups for all GBC



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

D. Trends in 10-year RS for Whites & Other Races

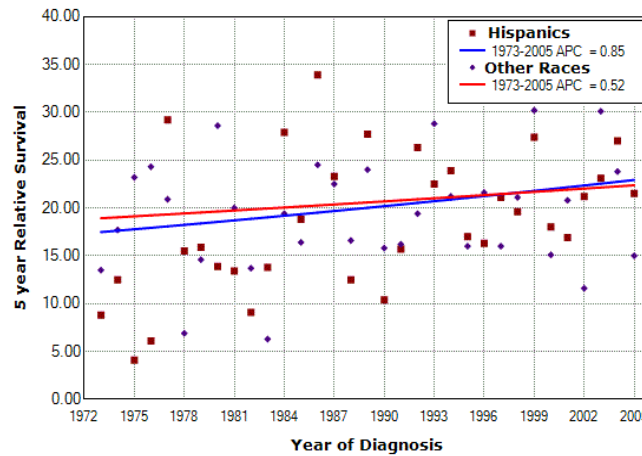
Trends in 5 year Relative Survival among Non-Hispanic Whites and Hispanics for all GBC



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

E. Trends in 5-yr RS: Non-Hispanic Whites & Other Races

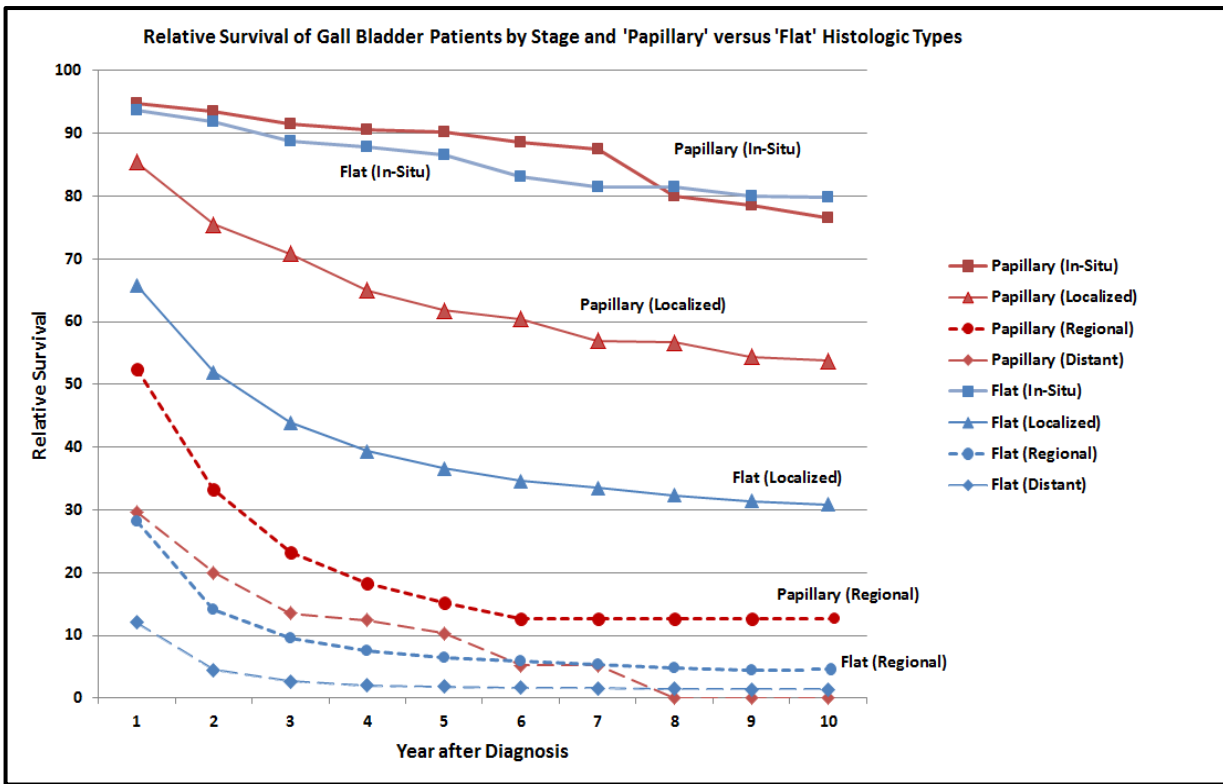
Trends in 5 year Relative Survival among Hispanics and Other Races for all GBC



^ The Annual Percent Change (APC) is significantly different from zero at alpha = 0.05

F. Trends in 10-yr RS: Non-Hispanic Whites & Other Races

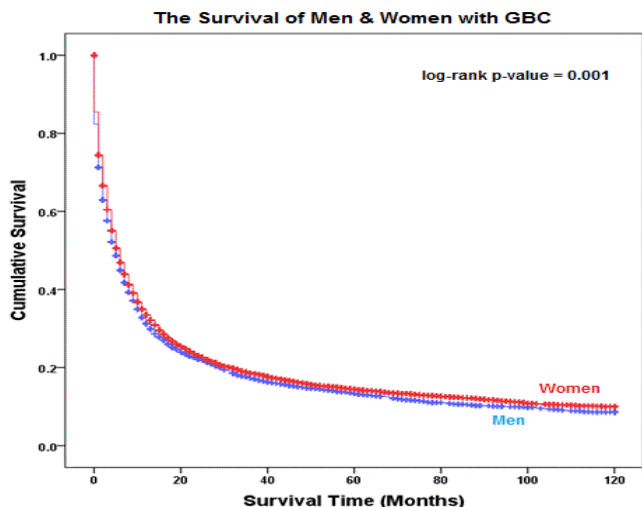
Appendix: Figure 5, Relative Survival of GBC cases by Histologic Types and Stage at Diagnosis.



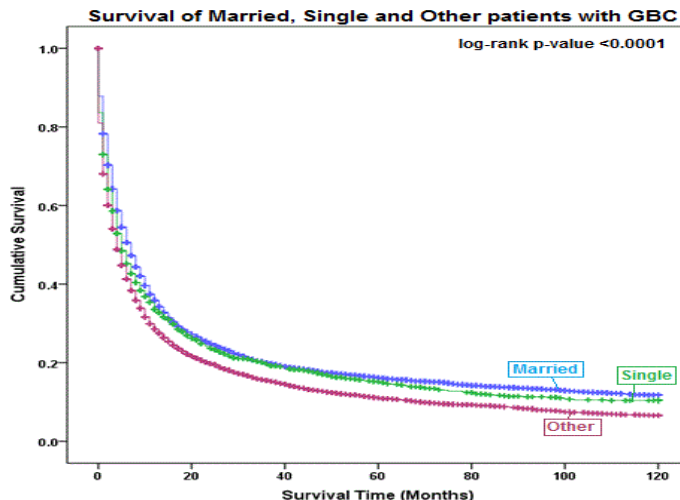
Relative Survival of GBC by Histology and Stage

	1yr (%)	2yr (%)	3yr (%)	4yr (%)	5yr (%)	6yr(%)	7 yr(%)	8yr (%)	9yr (%)	10yr (%)
Papillary (In-Situ)	94.8	93.5	91.4	90.6	90.3	88.6	87.4	80	78.5	76.6
Papillary (Localized)	85.4	75.5	70.8	65	61.8	60.4	57	56.7	54.4	53.8
Papillary (Regional)	52.5	33.3	23.2	18.3	15.2	12.7	12.7	12.7	12.7	12.7
Papillary (Distant)	29.7	20	13.5	12.4	10.3	5.2	5.2	0	0	0
Flat (In-Situ)	93.7	91.9	88.7	87.8	86.6	83.1	81.5	81.5	80	79.8
Flat (Localized)	65.8	51.9	43.9	39.3	36.6	34.6	33.5	32.3	31.4	30.9
Flat (Regional)	28.2	14.2	9.5	7.5	6.5	5.9	5.3	4.8	4.4	4.4
Flat (Distant)	12.1	4.5	2.7	2	1.8	1.7	1.6	1.5	1.4	1.4

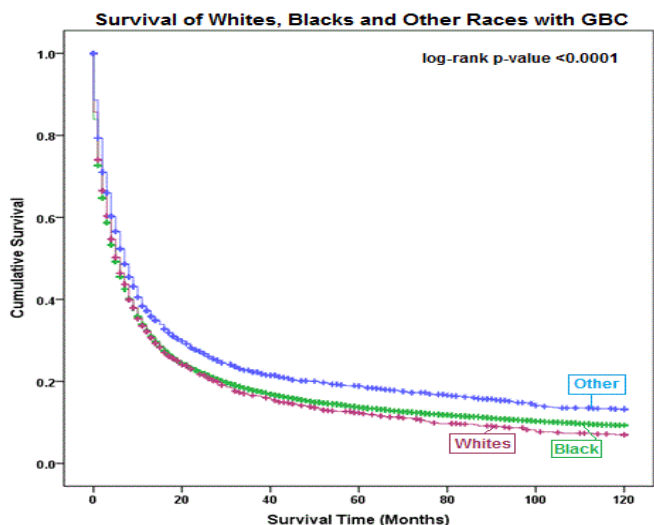
Appendix: Figure 6 (A-F). K-M Survival Curves for patients with GBC by Demographic characteristics



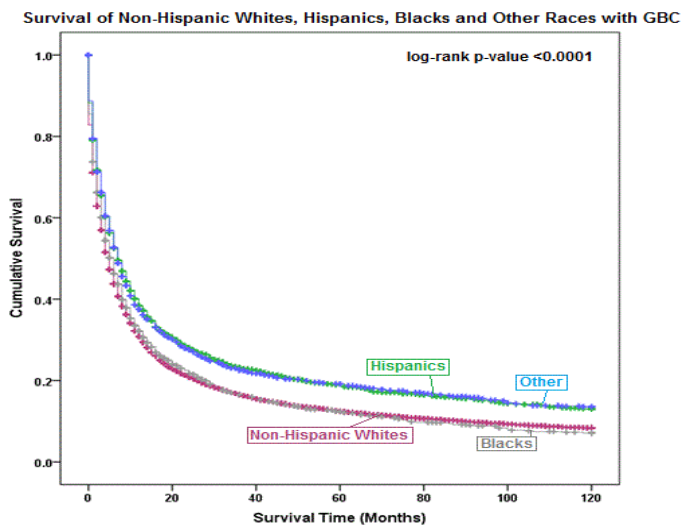
A. K-M Survival by Gender



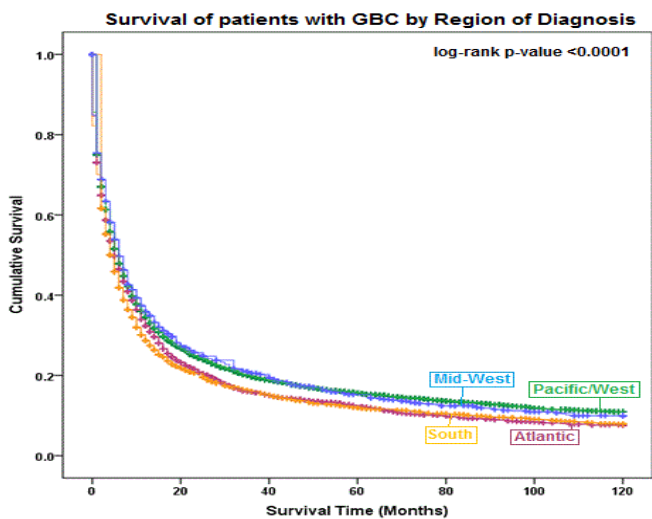
B. K-M Survival by Marital Status



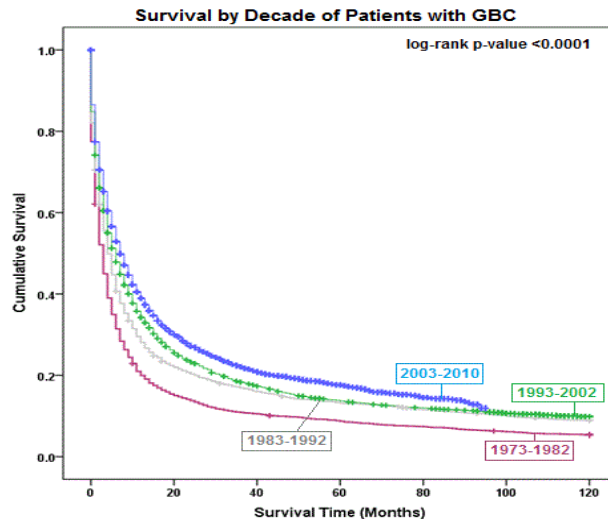
C. K-M Survival by Race



D. K-M Survival by Racio-ethnic groups

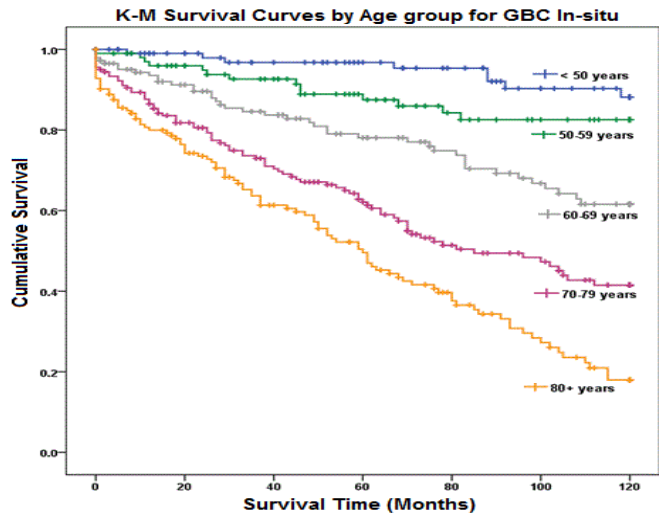


E. K-M Survival by Region of Diagnosis

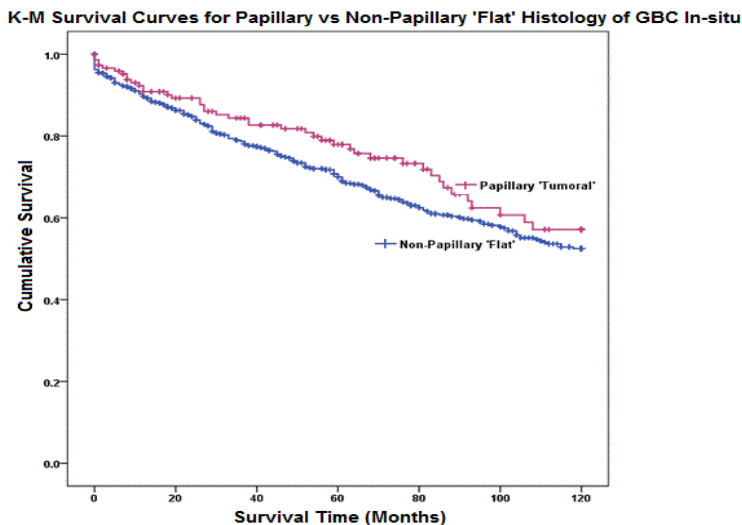


F. K-M Survival by Period of Diagnosis

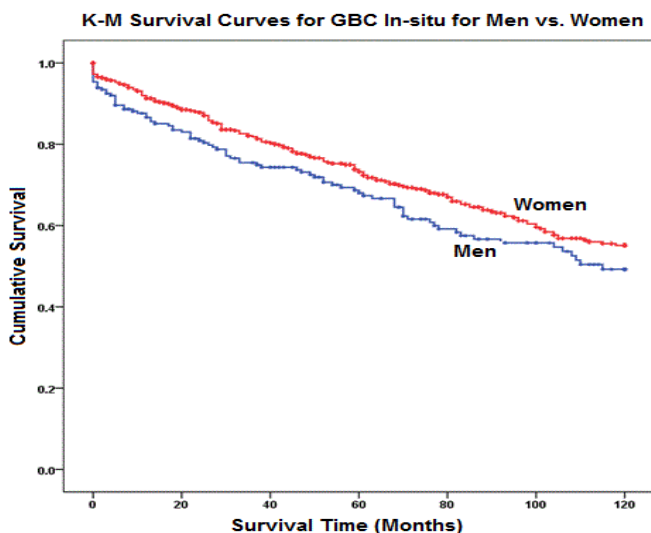
Appendix, Figure 7 (A-F). Kaplan-Meier (K-M) Survival Curves for GB-CIS cases (1973-2010)



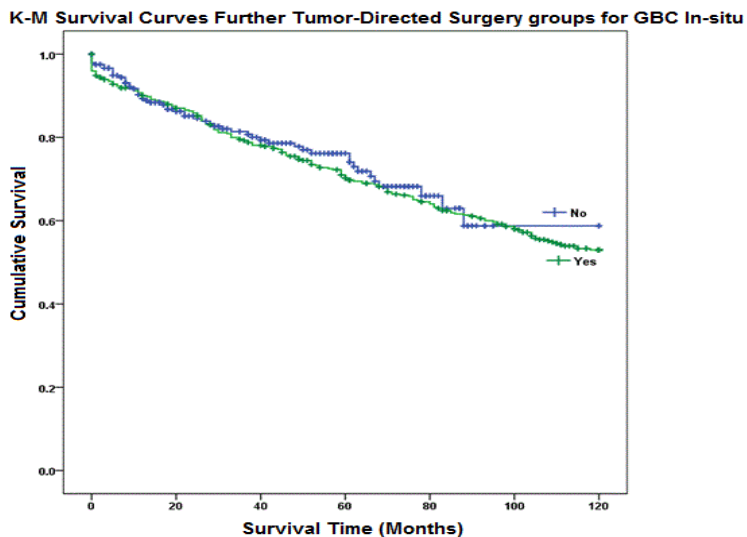
A. K-M Survival Curves for GB-CIS by age group



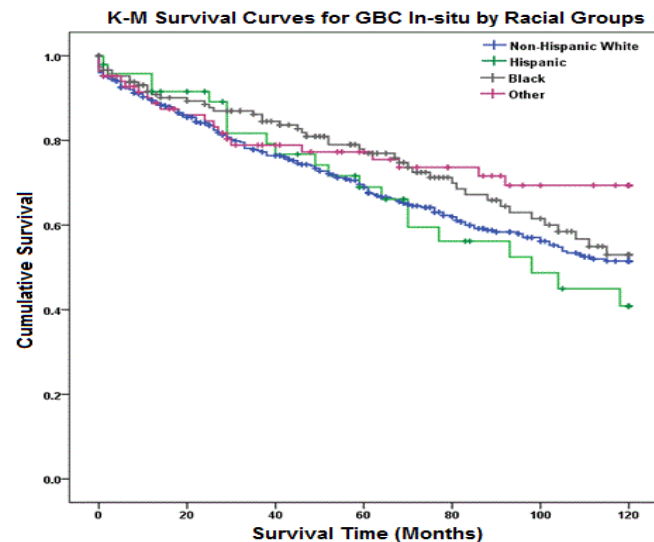
B. K-M Survival Curves for GB-CIS by Histology



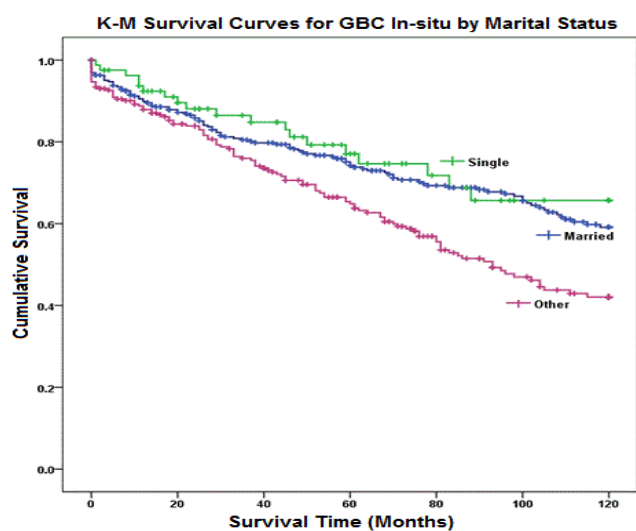
C. K-M Survival Curves for GB-CIS by Gender



D. K-M Survival Curves for Further Tumor Surgery



E. K-M Survival Curves for GB-CIS by Race/ethnicity



F. K-M Survival Curves for GB-CIS by Marital Status