Ashland Nyanza Health Study
Tables

LISTS

List 1:   Description of Exposure Areas on Nyanza Map B

Areas On Map B	Area Description
A	Metcalf Ave, Forest Ave, Tilton Ave, off Pleasant St, the area just south of Pleasant St, abutting the railroad tracks, along Chemical or Purple Brooks, near street entrance to the site (Megunko Road), near or around the on-site office buildings, the ponds or lagoons located near or around the on-site office buildings
B	Eastern Wetlands, Trolley Brook Wetlands, wetlands near Cherry Street, wetlands near Megunko Road/street entrance to the property
C	Behind Ashland High School, the football/baseball fields and track, along the path into the Nyanza site boundary area
D	The Hill area, Megunko Hill, the two ponds seated on top of the Hill
E	Southwest of Pleasant Street, baseball field located south of Pleasant Street, Western Wetlands, the area long the tracks
F	Sudbury River, near or at the bridge joining Cordaville Road and Pleasant Street, near or at the High Street bridge
G	Baseball field located north of Pleasant Street, the Sudbury River, Mill Pond
H	Sudbury River, Myrtle Street Dam or the dam at Myrtle
I	Stone Park
Nyanza	Nyanza Site Area (Areas A,B,D,E)

List 2:   Description of Specific Exposure Locations within Defined Areas on Map B

Question No.	Area Description
C14a	Chemical Brook or Purple Brook
C14b	The railroad tracks in Area A on Map B
C14c	The railroad tracks in Area E on Map B
C14d	The railroad tracks in Area F on Map B
C14e	The Nyanza office buildings
C14f	Derby Chemical
C14g	The ponds located at the top of Megunko Hill area or Megunko Hill
C14h	The Hill area or Megunko Hill
C14i	The ponds located near Nyanza office buildings, south of Pleasant Street
C14j	The wetlands (swampy, marshy) area behind Cherry Street
C14k	The woods behind Ashland High School playing fields

List 3:   List of Chemicals and Occupational Materials

Material
Mercury
Cadmium
Arsenic
Lead
Paints or paint products, paint thinner or remover
Perchloroethylene (PERC), Tetrachloroethylene, Solvene, cleaning solvents
Trichloroethylene (TCE), Triasol, Carbona, Trichlor
Phenoxy-herbicides, 2,4,5-T, Agent Orange
Herbicides other than phenoxy-herbicides
Insecticides
Pesticides
Ionizing radiation, such as x-rays
Poly vinyl chloride (PVC)
Chlorinated chemicals
Chemical dyes

Table 1:   1982 - 1994 Cancer incidence in Ashland, MA for males and females less than 40 years

	Observed # Cases	Expected # Cases	Standardized Incidence Ratio (SIR)	95% Confidence Interval
Males	29	15.2	191	128 – 274
Females	41	10.4	396	284 - 537
Total	70	25.5	274	214 - 346

Note: Standardized Incidence Ratio = Observed # Cases/ Expected #cases x 100
        * indicates statistically significant (p<0.05)

Table 2:   Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and Self-Reported a Cancer Diagnosis

Exposure Area	Area Description	Relative Risk	Chi-Square p-value	95% Confidence Interval	
A	Nyanza site waste ponds & lagoons	1.40	0.145	0.89	2.19
B	Eastern Wetlands	1.17	0.498	0.48	1.83
C	Ashland High School , high school fields and path to Nyanza	0.78	0.557	0.35	1.76
D	Megunko Hill	1.35	0.201	0.85	2.13
E	Western Wetlands, baseball field, railroad tracks	1.17	0.499	0.75	1.82
F	Sudbury River near High Street Bridge	1.36	0.173	0.87	2.13
G	Sudbury River, Mill Pond, baseball field	1.47	0.106	0.92	2.34
H	Sudbury River, Myrtle Dam	1.26	0.310	0.81	1.97
I	Stone Park	1.82	0.176	0.75	4.46
Nyanza site	Nyanza Area (Areas A,B,D,E)	1.19	0.482	0.73	1.96

Note: Relative risk = risk exposed/risk in non-exposed

Table 3: Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and a Self-Reported Cancer Diagnosis Stratified by Family History of Cancer

Exposure Area	Family History of Cancer				No Family History of Cancer			
	Relative Risk	Chi-Square p-value	95% Confidence Interval		Relative Risk	Chi-Square p-value	95% Confidence Interval	
A	1.56	0.1376	0.86	2.83	1.18	0.6330	0.59	2.36
B	**1.81**	**0.0453**	**1.00**	**3.26**	0.63	0.2177	0.30	1.32
C	0.96	1.000 (f)	0.31	2.99	0.63	0.4374 (f)	0.19	2.00
D	1.48	0.1912	0.82	2.66	1.11	0.7808	0.53	2.32
E	1.17	0.6021	0.65	2.09	1.18	0.6476	0.59	2.34
F	**1.80**	**0.0489**	**0.99**	**3.26**	0.92	0.8235	0.46	1.86
G	**1.96**	**0.0374**	**1.02**	**3.75**	1.10	0.9785	0.51	2.02
H	1.66	0.0908	0.92	3.01	0.86	0.6615	0.43	1.72
I	2.93	0.1059	0.72	11.89	1.17	1.000 (f)	0.36	3.75
Nyanza site	1.29	0.4438	0.67	2.52	1.05	0.9009	0.50	2.19

Note: Note: Relative risk = risk exposed/risk in non-exposed

Table 4: Analysis of Nyanza Exposure by Playing or Engaging in Any Type of Activity in Specific Locations within Areas of Map B and Self-Reported Cancer Diagnosis

Exposure Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	1.46	0.0994	0.93	2.30
Railroad tracks in Area A	1.23	0.3742	0.78	1.93
Railroad tracks in Area B	1.29	0.2748	0.82	2.05
Railroad tracks in Area F	1.20	0.4692	0.73	1.99
Nyanza office buildings	1.32	0.3123	0.77	2.25
Derby Chemical	0.59	1.000 (f)	0.09	4.14
Megunko Hill ponds	**1.84**	**0.0538**	**0.99**	**3.43**
Hill area or Megunko Hill	1.38	0.2681	0.78	2.45
Entire Megunko Hill area (ponds + Hill area combined)	1.43	0.1719	0.86	2.40
Ponds near Nyanza, south of Pleasant Street	1.50	0.1633	0.85	2.65
Wetlands area behind Cherry Street	0.73	0.3496	0.38	1.41
Woods behind Ashland High School fields	0.81	0.3564	0.52	1.27

Table 5: **Analysis of Discoloration of Skin or Clothing after Contact with Specific Nyanza Exposure Areas and Self-Reported Cancer Diagnosis**

Exposure Area Description	Relative Risk	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	1.22	0.6049	0.57	2.61
Railroad tracks in Area A	1.45	0.3598 (f)	0.55	3.84
Railroad tracks in Area B	2.37	0.0928 (f)	0.92	6.12
Railroad tracks in Area F	---	1.000 (f)	---	---
Nyanza office buildings	1.38	0.4805 (f)	0.45	4.20
Derby Chemical	---	1.000 (f)	---	---
Megunko Hill ponds	0.88	1.000 (f)	0.13	6.04
Hill area or Megunko Hill	0.98	1.000 (f)	0.14	6.72
Ponds near Nyanza, south of Pleasant Street	1.55	0.4422 (f)	0.55	4.71
Wetlands area behind Cherry Street	0.42	0.7266 (f)	0.06	2.96
Woods behind Ashland High School fields	**4.21**	**0.0146 (f)**	**1.71**	**10.38**

Table 6: **Analysis of Skin Irritation or Rashes after Contact with Specific Nyanza Exposure Areas and Self-Reported Cancer Diagnosis**

Exposure Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	---	0.6353 (f)	---	---
Railroad tracks in Area A	---	0.6271 (f)	---	---
Railroad tracks in Area B	1.48	0.5035 (f)	0.222	9.865
Railroad tracks in Area F	---	1.000 (f)	---	---
Nyanza office buildings	1.07	0.6187 (f)	0.158	7.307
Derby Chemical	---	1.000 (f)	---	---
Megunko Hill ponds	2.44	0.3462 (f)	0.385	15.498
Hill area or Megunko Hill	4.02	0.2280 (f)	0.685	23.529
Ponds near Nyanza, south of Pleasant Street	---	1.000 (f)	---	---
Wetlands area behind Cherry Street	1.36	0.5324 (f)	0.203	9.134
Woods behind Ashland High School fields	---	1.000 (f)	---	---

Table 7: **Analysis of Visualization of Chemical Drums in Specific Nyanza Exposure Areas and Self-Reported Cancer Diagnosis**

Exposure Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	1.07	0.8440	0.55	2.06
Railroad tracks in Area A	0.73	0.8154 (f)	0.27	1.98
Railroad tracks in Area B	1.61	0.7415 (f)	0.38	3.56
Railroad tracks in Area F	---	0.6217 (f)		
Nyanza office buildings	1.02	0.9576	0.48	2.18
Derby Chemical	0.82	1.000 (f)	0.12	5.67
Megunko Hill ponds	1.35	0.4894 (f)	0.44	4.11
Hill area or Megunko Hill	1.37	0.4849 (f)	0.45	4.17
Ponds near Nyanza, south of Pleasant Street	0.54	0.5777	0.13	2.15
Wetlands area behind Cherry Street	---	0.0701 (f)		
Woods behind Ashland High School fields	0.45	0.7218 (f)	0.06	3.13

Table 8: **Analysis of Areas on Map B in which Participants Ever Swam or Waded and a Self-Reported Cancer Diagnosis**

Ever Swam In Area	Area Description	Relative Risk	Chi-Square p-value	95% Confidence Interval	
A	Nyanza site, waste ponds & lagoons	1.16	0.6487	0.62	2.16
B	Eastern Wetlands	1.36	0.3302	0.73	2.54
C	Ashland High School, high school fields, path to Nyanza	1.51	0.2133	0.79	2.90
D	**Megunko Hill and two ponds on hill**	**2.48**	**0.0236**	**1.13**	**5.44**
E	Western Wetlands, baseball field, railroad tracks	NA (zero cell)	0.3964 (f)		
F	Sudbury River, near High Street Bridge	1.42	0.1737	0.86	2.36
G	Sudbury River, Mill Pond, baseball field	1.24	0.3707	0.77	1.99
H	Sudbury River, Myrtle Dam	1.58	0.0835	0.94	2.64
I	Stone Park	1.21	0.4307	0.75	1.95
D (F11=1)	Swimming at Megunko Hill and ponds **Positive family history of cancer**	**3.03**	**0.0274 (f)**	**1.30**	**7.08**
D (F11=2)	Swimming at Megunko hill and ponds Negative family history of cancer	1.11	0.6090 (f)	0.16	7.77

Table 9: **Analysis of Specific Areas on Map B in Which Participants Ever Swam/Wade and a Self-Reported Cancer Diagnosis**

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	2.76	0.1286	0.75	10.17
Chemical or Purple Brook and Family History	2.39	0.3567	0.39	14.66
Chemical or Purple Brook and No Family History	3.27	0.2076	0.51	21.15
Megunko Hill ponds	**6.48**	**0.0020**	**2.04**	**20.56**
Megunko Hill ponds and Family History	**14.46**	**0.0003**	**10.76**	**19.43**
Megunko Hill Ponds and No Family History	5.25	0.0626	0.88	31.39
Ponds near Nyanza, south of Pleasant Street	**5.55**	**0.0056**	**1.68**	**18.31**
w/Family History	**7.36**	**0.0008**	**2.65**	**20.55**
No Family History	Zero cell	0.8871 (f)		
Wetlands area behind Cherry Street	**6.41**	**0.0293**	**1.27**	**32.25**
w/ Family History	**7.21**	**0.0177**	**1.75**	**29.78**
No Family History	Zero cell	0.9609 (f)		

Table 10: **Analysis of Areas on Map B in which Participants Ever Played Ice Hockey and a Self-Reported Cancer Diagnosis**

Ever Played Ice Hockey in Area	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza site, waste ponds & lagoons	1.29	0.4411	0.68	2.46
B	Eastern Wetlands	0.94	0.8473	0.50	1.76
C	Ashland High School, high school fields, path to Nyanza	NA (zero cell)	0.6392 (f)		
D	Megunko Hill and two ponds on hill	1.61	0.1176	0.89	2.92
E	Western Wetlands, baseball field, railroad tracks	NA (zero cell)	0.3964 (f)		
F	Sudbury River, near High Street Bridge	1.22	0.5392	0.65	2.27
G	Sudbury River, Mill Pond, baseball field	1.22	0.4058	0.76	1.95
H	Sudbury River, Myrtle Dam	0.86	0.7582	0.32	2.30
I	Stone Park	1.20	0.6211	0.59	2.44

Table 11:   **Analysis of Areas on Map B in which Participants Ever Went Ice Skating and a Self-Reported Cancer Diagnosis**

Ever Ice Skated in Area	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza site, waste ponds & lagoons	1.23	0.5380	0.64	2.34
B	Eastern Wetlands	0.89	0.7208	0.48	1.67
C	Ashland High School, high school fields, path to Nyanza	1.18	0.6495	0.58	2.41
D	Megunko Hill and two ponds on hill	1.54	0.1561	0.85	2.80
E	Western Wetlands, baseball field, railroad tracks	NA (zero cell)	1.000 (f)		
F	Sudbury River, near High Street Bridge	1.19	0.5741	0.65	2.17
G	Sudbury River, Mill Pond, baseball field	1.20	0.4170	0.77	1.89
H	Sudbury River, Myrtle Dam	1.45	0.2267	0.80	2.63
I	Stone Park	2.74	0.3157 (f)	0.44	17.04

Table 12:   **Table Analysis of Areas on Map B in which Participants Ever Fished and Self-Reported Cancer Diagnosis**

Ever Fished in Area (C6)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	NA (zero cell)	1.000 (f)		
B	Eastern Wetlands	1.17	0.6398	0.61	2.23
C	Ashland HS, fields, path to Nyanza	NA (zero for exposure category)	NA		
D	Megunko Hill and two ponds on hill	6.41	0.1498 (f)	1.27	32.3
E	Western Wetlands, bb field, RR tracks	NA (zero cell)	1.000 (f)		
F	Sudbury River, near High St. bridge	0.96	0.8770	0.58	1.59
G	Sudbury River, Mill Pond, bb field	0.95	0.8069	0.60	1.49
H	Sudbury River, Myrtle Dam	0.98	0.9579	0.53	1.84
I	Stone Park	NA (zero cell)	1.000 (f)		

Table 13: Table Analysis of Areas on Map B in which Participants Ever Built Forts and Self-Reported Cancer Diagnosis

Ever Built Forts in Area (C7)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.31	0.3772	0.72	2.39
B	Eastern Wetlands	0.96	0.8990	0.50	1.84
C	Ashland HS, fields, path to Nyanza	1.26	0.4820	0.66	2.41
D	Megunko Hill and two ponds on hill	1.07	0.8597	0.50	2.28
E	Western Wetlands, bb field, RR tracks	1.29	0.4264	0.69	2.40
F	Sudbury River, near High St. bridge	0.72	0.4204	0.32	1.63
G	Sudbury River, Mill Pond, bb field	1.54	0.1048	0.91	2.61
H	Sudbury River, Myrtle Dam	1.46	0.1788	0.84	2.52
I	Stone Park	1.08	0.8202	0.56	2.06

Table 14: Table Analysis of Areas on Map B in which Participants Ever Hunted and Self-Reported Cancer Diagnosis

Ever Hunted in Area (C8)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	0.91	0.8288	0.37	2.20
B	Eastern Wetlands	1.28	0.5026	0.63	2.60
C	Ashland HS, fields, path to Nyanza	NA (zero cell)	1.000 (f)		
D	Megunko Hill and two ponds on hill	0.82	0.6615	0.34	2.00
E	Western Wetlands, bb field, RR tracks	NA (zero cell)	1.000 (f)		
F	Sudbury River, near High St. bridge	1.41	0.3217	0.72	2.76
G	Sudbury River, Mill Pond, bb field	1.20	0.6162	0.60	2.45
H	Sudbury River, Myrtle Dam	NA (zero cell)	1.000 (f)		
I	Stone Park	NA (zero for exposure category)	NA		

Table 15: Table Analysis of Areas on Map B in which Participants Ever Caught Turtles or Frogs and Self-Reported Cancer Diagnosis

Ever Caught Animals in Area (C9)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	0.93	0.8159	0.48	1.77
B	Eastern Wetlands	0.92	0.7964	0.49	1.72
C	Ashland HS, fields, path to Nyanza	1.10	0.7698	0.60	2.05
D	Megunko Hill and two ponds on hill	1.10	0.7750	0.58	2.10
E	Western Wetlands, bb field, RR tracks	1.10	0.7750	0.58	2.10
F	Sudbury River, near High St. bridge	1.11	0.6948	0.66	1.86
G	Sudbury River, Mill Pond, bb field	1.11	0.6741	0.69	1.77
H	Sudbury River, Myrtle Dam	1.46	0.3071 (f)	0.66	3.27
I	Stone Park	1.21	0.5575	0.65	2.24

Table 16: Table Analysis of Areas on Map B in which Participants Ever Hung-Out with Friends and Self-Reported Cancer Diagnosis

Ever Hung-Out in Area (C10)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.03	0.9191	0.62	1.71
B	Eastern Wetlands	0.96	0.8771	0.55	1.66
C	Ashland HS, fields, path to Nyanza	0.92	0.7177	0.58	1.46
D	Megunko Hill and two ponds on hill	1.02	0.9557	0.53	1.95
E	Western Wetlands, bb field, RR tracks	0.73	0.3001	0.40	1.33
F	Sudbury River, near High St. bridge	0.98	0.9314	0.59	1.63
G	Sudbury River, Mill Pond, bb field	1.31	0.2366	0.84	2.07
H	Sudbury River, Myrtle Dam	1.16	0.5499	0.71	1.89
I	Stone Park	1.29	0.3009	0.80	2.09

Table 17: **Table Analysis of Areas on Map B in which Participants Ever Biked and Self-Reported Cancer Diagnosis**

Ever Biked in Area (C11)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.09	0.7292	0.67	1.76
B	Eastern Wetlands	1.50	0.0941	0.93	2.40
C	Ashland HS, fields, path to Nyanza	1.21	0.4064	0.77	1.89
D	Megunko Hill and two ponds on hill	1.45	0.1961	0.83	2.55
E	Western Wetlands, bb field, RR tracks	1.29	0.3505	0.77	2.18
F	Sudbury River, near High St. bridge	1.32	0.2434	0.83	2.11
G	Sudbury River, Mill Pond, bb field	1.39	0.1542	0.88	2.20
H	Sudbury River, Myrtle Dam	1.06	0.8190	0.66	1.69
I	Stone Park	1.01	0.9797	0.64	1.58

Table 18: **Table Analysis of Areas on Map B in which Participants Ever Ran, Hiked, Walked and Self-Reported Cancer Diagnosis**

Ever Ran, Hiked, Walked in Area (C12)	Area Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.32	0.2382	0.83	2.08
B	Eastern Wetlands	1.23	0.3923	0.77	1.98
C	Ashland HS, fields, path to Nyanza	1.04	0.8746	0.65	1.66
D	Megunko Hill and two ponds on hill	1.36	0.2426	0.81	2.28
E	Western Wetlands, bb field, RR tracks	1.43	0.1613	0.87	2.35
F	Sudbury River, near High St. bridge	1.46	0.1091	0.92	2.32
G	Sudbury River, Mill Pond, bb field	1.35	0.2006	0.85	2.12
H	Sudbury River, Myrtle Dam	1.04	0.8707	0.65	1.67
I	Stone Park	1.11	0.6690	0.70	1.76

Table 19   Positive Response Frequencies for Areas on Map B in which Participants Ever Did Any Other Activity and Significance Testing Using the Two-Sample T-Test for Means

Any other activity in area (C13)	All Participants (%)	Self – Reported Cancer Cases (u1 %)	Non – Cancer Participants (u2 %)	Two-sample T-test for Means (Ho: u1-u2=0)
A	78 (5.6)	5 (6.9)	73 (5.6)	Not significant
B	63 (4.5)	1 (1.4)	62 (4.7)	Not significant
C	226 (16.3)	14 (19.2)	212 (16.1)	Not significant
D	43 (3.1)	3 (4.1)	40 (3.0)	Not significant
E	117 (8.4)	7 (9.6)	110 (8.4)	Not significant
F	80 (5.8)	4 (5.5)	76 (5.8)	Not significant
G	90 (6.5)	6 (8.2)	84 (6.4)	Not significant
H	50 (3.6)	3 (4.1)	47 (3.6)	Not significant
I	200 (14.4)	12 (16.4)	188 (14.3)	Not significant

Table 20:   Table Analysis of Areas with Natural Bodies of Water in which Participants Ever Swam and Self-Reported Cancer Diagnosis

Ever Swam in Area (C33)	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
The Sudbury River	0.83	0.6076	0.40	1.71
Mill Pond	0.98	0.9556	0.46	2.11
The Raceway	1.91	0.3467	0.50	7.31
High Street Bridge	0.83	0.7907	0.21	3.30
Ashland Reservoir	1.51	0.3637	0.61	3.70
Any other location in Ashland	0.58	0.088	0.31	1.10
In the Framingham Reservoir	1.30	0.3907	0.72	2.35

Table 21:   Table Analysis of Areas with Natural Bodies of Water in which Participants Ever Fished and Self-Reported Cancer Diagnosis

Ever Fished in Area (C30)	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
The Sudbury River	1.39	0.2933	0.75	2.56
Mill Pond	1.06	0.9849	0.57	1.77
The Raceway	1.29	0.5784	0.53	3.17
High Street Bridge	1.47	0.1958	0.82	2.65
Ashland Reservoir	0.95	0.8758	0.48	1.87
Any other location in Ashland	0.64	0.1915	0.32	1.27
In the Framingham Reservoir	0.88	0.7092	0.45	1.71

Table 22:   Table Analysis of Fish Consumption from Areas with Natural Bodies of Water (Categorical 1) and Self-Reported Cancer Diagnosis

Eat Fish from Area (C31_ever)	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
The Sudbury River	0.52	0.1301	0.22	1.24
Mill Pond	0.66	0.4275	0.23	1.88
The Raceway	NA (zero cell)	0.3139 (f)		
High Street Bridge	0.33	0.1132	0.08	1.43
Ashland Reservoir	0.69	0.3011	0.34	1.41
Any other location in Ashland	0.60	0.5168	0.13	2.84
In the Framingham Reservoir	0.28	0.1803	0.04	2.12

Table 23: Table Analysis of Fish Consumption from Areas with Natural Bodies of Water (Categorical 2) and Self-Reported Cancer Diagnosis

Eat Fish from Area (C31_rec)	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
The Sudbury River	0.74	1.000 (f)	0.18	3.01
Mill Pond	0.66	1.000 (f)	0.09	4.71
The Raceway	NA (zero cell)	1.000 (f)		
High Street Bridge	0.90	1.000 (f)	0.13	6.40
Ashland Reservoir	0.88	1.000 (f)	0.28	2.80
Any other location in Ashland	1.43	0.5359 (f)	0.19	10.88
In the Framingham Reservoir	1.36	0.5493 (f)	0.19	9.99

Table 24: Table Analysis of Participation in Community Organizations in Ashland, Sports at Ashland High School, and Use of Path behind School and Self-Reported Cancer Diagnosis

Variable Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
Ever participate in community organization in Ashland	1.06	0.8245	0.65	1.72
Ever participate for meetings or organizations at Nyanza site	0.95	0.8537	0.52	1.73
Ever participate in sports at Ashland High School	0.83	0.4897	0.50	1.40
Ever practice sports at Nyanza site	0.82	0.8429	0.12	5.68
Use of path through Nyanza as part of participation in sports	0.96	0.9040	0.52	1.78
Use of path through Nyanza by all participants	1.31	0.2467	0.83	2.08

Table 25: Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and Confirmed Cancer Diagnosis

Exposure Area	Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza Site, waste ponds & lagoons	1.09	0.785	0.58	2.05
B	Eastern Wetlands	0.89	0.721	0.48	1.67
C	Ashland HS, fields, path to Nyanza	0.87	0.808	0.27	2.75
D	Megunko Hill, two ponds on hill	1.17	0.637	0.62	2.21
E	Western Wetlands, bb field, RR tracks	1.15	0.663	0.62	2.11
F	Sudbury River, near High St. bridge	0.75	0.377	0.40	1.42
G	Sudbury River, Mill Pond, bb field	0.90	0.725	0.49	1.65
H	Sudbury River, Myrtle Dam	0.86	0.626	0.46	1.59
I	Stone Park	1.65	0.390	0.52	5.3

Table 26: Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and Confirmed Cancer Diagnosis Stratified by Family History of Cancer

Exposure Area	Family History of Cancer				No Family History of Cancer			
	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval		Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	0.96	0.921	0.39	2.32	1.22	0.644	0.52	2.84
B	1.51	0.360	0.62	3.66	0.53	0.176	0.21	1.35
C	0.63	0.526	0.15	2.63	1.35	0.768	0.18	9.82
D	1.15	0.767	0.46	2.87	1.17	0.736	0.48	2.85
E	1.16	0.748	0.48	2.80	1.14	0.763	0.49	2.65
F	1.10	0.829	0.45	2.67	0.51	0.152	0.20	1.30
G	1.08	0.869	0.44	2.64	0.76	0.515	0.32	1.76
H	1.02	0.972	0.42	2.46	0.73	0.474	0.31	1.74
I	1.23	0.764	0.29	5.29	2.49	0.303 (f)	0.34	18.37

Table 27: **Analysis of Specific Areas on Map B in Which Participants Ever Played or Spent Time and Confirmed Cancer Diagnosis**

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	**2.08**	**0.0200**	**1.11**	**3.90**
Railroad tracks in Area A	1.02	0.9306	0.55	1.94
Railroad tracks in Area B	0.99	0.9779	0.51	1.93
Railroad tracks in Area F	0.81	0.5835	0.37	1.74
Nyanza office buildings	1.19	0.6591	0.55	2.60
Derby Chemical	1.18	0.8669	0.17	8.40
Megunko Hill ponds	1.61	0.3107	0.64	4.10
Hill area or Megunko Hill	1.36	0.4657	0.59	3.07
Entire Megunko Hill area (ponds + Hill area combined)	1.46	0.2913	0.72	2.95
Ponds near Nyanza, south of Pleasant Street	1.42	0.3981	0.62	3.21
Wetlands area behind Cherry Street	0.55	0.2449	0.20	1.54
Woods behind Ashland High School fields	0.98	0.9599	0.52	1.85

Table 28: **Analysis of Specific Areas on Map B in Which Participants Ever Played or Spent Time and Confirmed Cancer Diagnosis by Family History of Cancer**

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	**2.72**	**0.0261**	**1.09**	**6.79**
Railroad tracks in Area A	1.89	0.1534	0.76	4.65
Railroad tracks in Area B	1.06	0.9100	0.40	2.82
Railroad tracks in Area F	1.67	0.2880	0.65	4.30
Nyanza office buildings	0.81	0.7388	0.23	2.80
Derby Chemical	NA (zero cell)	0.4831		
Megunko Hill ponds	2.00	0.2575	0.59	6.77
Hill area or Megunko Hill	**2.79**	**0.0321**	**1.06**	**7.36**
Entire Megunko Hill area (ponds + Hill area combined)	**2.54**	**0.0391**	**1.02**	**6.30**
Ponds near Nyanza, south of Pleasant Street	2.12	0.1779	0.70	6.39
Wetlands area behind Cherry Street	1.34	0.5987	0.45	4.04
Woods behind Ashland High School fields	1.21	0.6782	0.48	3.04

Table 29: Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and Rare Cancer Diagnosis

Exposure Area	Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza Site, waste ponds & lagoons	1.63	0.2206	0.74	3.61
B	Eastern Wetlands	1.24	0.5926	0.57	2.69
C	Ashland HS, fields, path to Nyanza	1.69	0.6018	0.23	12.32
D	Megunko Hill, two ponds on hill	1.70	0.1776	0.78	3.72
E	Western Wetlands, bb field, RR tracks	1.37	0.4235	0.63	2.99
F	Sudbury River, near High St. bridge	1.16	0.7101	0.53	2.52
G	Sudbury River, Mill Pond, bb field	1.22	0.6282	0.55	2.69
H	Sudbury River, Myrtle Dam	1.74	0.1652	0.79	3.85
I	Stone Park	1.54	0.5501	0.37	6.48

Table 30: Table Analysis of Areas on Map B in Which Participants Ever Played or Spent Time and Rare Cancer Diagnosis Stratified by Family History of Cancer

Exposure Area	Family History of Cancer			No Family History of Cancer		
	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval
A	1.24	0.696	0.42 — 3.65	2.21	0.178	0.67 — 7.31
B	1.58	0.399	0.54 — 4.65	0.95	0.925	0.30 — 2.96
C	NA (zero cell)	0.321(f)		0.74	0.771	0.10 — 5.62
D	1.23	0.712	0.41 — 3.71	2.33	0.128	0.76 — 7.16
E	1.10	0.861	0.37 — 3.24	1.75	0.327	0.56 — 5.48
F	1.43	0.514	0.49 — 4.20	0.91	0.876	0.29 — 2.85
G	2.61	0.125	0.73 — 9.40	0.59	0.364	0.19 — 1.86
H	1.81	0.287	0.59 — 5.46	1.66	0.379	0.53 — 5.18
I	1.76	0.578	0.23 — 13.35	1.37	0.759	0.18 — 10.51

Table 31: **Analysis of Specific Areas on Map B in Which Participants Ever Played or Spent Time and Rare Cancer Diagnosis**

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	2.19	0.0542	0.97	4.95
Railroad tracks in Area A	1.29	0.5293	0.58	2.92
Railroad tracks in Area B	1.55	0.2784	0.70	3.43
Railroad tracks in Area F	0.82	0.6960	0.31	2.19
Nyanza office buildings	**2.91**	**0.0106**	**1.24**	**6.82**
Derby Chemical	2.10	0.4558	0.29	15.29
Megunko Hill ponds	**3.12**	**0.0190**	**1.15**	**8.46**
Hill area or Megunko Hill	1.87	0.2197	0.68	5.13
Entire Megunko Hill area (ponds + Hill area combined)	2.06	0.0823	0.90	4.72
Ponds near Nyanza, south of Pleasant Street	**2.84**	**0.0175**	**1.16**	**6.95**
Wetlands area behind Cherry Street	0.94	0.9170	0.32	2.77
Woods behind Ashland High School fields	1.14	0.7523	0.50	2.59

Table 32: **Analysis of Specific Areas on Map B in Which Participants Ever Played or Spent Time and Rare Cancer Diagnosis and Positive Family History of Cancer**

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	1.85	0.2568	0.63	5.43
Railroad tracks in Area A	2.21	0.1487	0.73	6.68
Railroad tracks in Area B	2.26	0.1269	0.77	6.64
Railroad tracks in Area F	1.60	0.4222	0.50	5.12
Nyanza office buildings	2.51	0.1003	0.81	7.71
Derby Chemical	NA (zero cell)			
Megunko Hill ponds	**4.68**	**0.0050**	**1.45**	**15.05**
Hill area or Megunko Hill	2.92	0.0700	0.87	9.79
Entire Megunko Hill area (ponds + Hill area combined)	**3.73**	**0.0102**	**1.27**	**10.88**
Ponds near Nyanza, south of Pleasant Street	**5.29**	**0.0019**	**1.65**	**16.91**
Wetlands area behind Cherry Street	1.94	0.2557	0.61	6.19
Woods behind Ashland High School fields	1.59	0.4290	0.49	5.11

Table 33: **Analysis of Areas on Map B in Which Participants Ever Swam/Wade and Confirmed Cancer Diagnosis**

Exposure Area	Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza Site, waste ponds & lagoons	1.65	0.1930	0.77	3.54
B	Eastern Wetlands	1.37	0.4661	0.58	3.23
C	Ashland HS, fields, path to Nyanza	1.37	0.4992	0.55	3.45
D	Megunko Hill, two ponds on hill	NA (zero cell)			
E	Western Wetlands, bb field, RR tracks	NA (zero cell)			
F	Sudbury River, near High St. bridge	1.19	0.6415	0.57	2.48
G	Sudbury River, Mill Pond, bb field	1.04	0.9169	0.84	2.03
H	**Sudbury River, Myrtle Dam**	**2.36**	**0.0081**	**1.23**	**4.53**
I	Stone Park	1.36	0.3524	0.71	2.58

Table 34: **Analysis of Areas on Map B in Which Participants Ever Swam/Wade and Confirmed Cancer Diagnosis Stratified by Family History of Cancer**

Exposure Area	Family History of Cancer				No Family History of Cancer			
	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval		Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	1.83	0.2708	0.62	5.43	1.51	0.4495	0.52	4.39
B	1.28	0.6888	0.38	4.33	1.43	0.5582	0.43	4.75
C	0.99	0.9980	0.23	4.24	1.76	0.3519	0.53	5.82
D	Zero cell	0.3562			Zero cell	0.4200		
E	Zero cell	0.7225			Zero cell	0.6171		
F	1.37	0.5420	0.49	3.77	1.02	0.9672	0.35	2.99
G	1.39	0.4848	0.55	3.53	0.77	0.6033	0.29	2.08
H	**4.16**	**0.0009**	**1.69**	**10.24**	1.24	0.6896	0.43	1.33
I	1.76	0.2180	0.71	4.40	1.04	0.9415	0.41	2.64

Table 35: **Analysis of Specific Areas on Map B in Which Participants Ever Swam/Wade and Confirmed Cancer Diagnosis Stratified by Family History of Cancer**

Exposure Area	Relative Risk	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	**5.16**	**0.0104**	**1.38**	**19.34**
Chemical or Purple Brook and Family History	5.44	0.0595	0.86	34.49
Chemical or Purple Brook and No Family History	4.91	0.0811	0.75	32.37
Megunko Hill ponds	NA (zero cell)	0.6723 (f)		
Megunko Hill ponds and Family History	NA (zero cell)	0.9680 (f)		
Megunko Hill Ponds and No Family History	NA (zero cell)	0.8741 (f)		
Ponds near Nyanza, south of Pleasant Street	**10.38**	**<0.0001**	**3.09**	**34.88**
Ponds near Nyanza, south of Pleasant Street and Family History	**17.35**	**<0.0001**	**5.86**	**51.42**
Ponds near Nyanza, south of Pleasant Street and no Family History	NA (zero cell)	0.9225 (f)		
Wetlands area behind Cherry Street	**11.83**	**0.0016**	**2.32**	**60.37**
Wetlands area behind Cherry Street and Family History	**16.44**	**0.0002**	**3.82**	**70.71**
Wetlands area behind Cherry Street and no Family History	NA (zero cell)	0.9735 (f)		

Table 36: **Analysis of Areas on Map B in Which Participants Ever Swam/Wade and Rare Cancer Diagnosis**

Exposure Area	Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza Site, waste ponds & lagoons	1.69	0.2883	0.64	4.46
B	Eastern Wetlands	1.99	0.1595	0.75	5.25
C	Ashland HS, fields, path to Nyanza	1.33	0.6358	0.40	4.42
D	Megunko Hill, two ponds on hill	1.19	0.8658	0.16	8.61
E	Western Wetlands, bb field, RR tracks	NA (zero cell for exposure)			
F	Sudbury River, near High St. bridge	1.04	0.9309	0.39	2.77
G	Sudbury River, Mill Pond, bb field	1.40	0.4196	0.62	3.17
H	Sudbury River, Myrtle Dam	1.58	0.3263	0.63	3.93
I	Stone Park	1.00	0.9953	0.42	2.39

Table 37: **Analysis of Areas on Map B in Which Participants Ever Swam/Wade and Rare Cancer Diagnosis and Family History of Cancer**

Exposure Area	Area Description	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
A	Nyanza Site, waste ponds & lagoons	0.58	0.5973	0.08	4.45
B	Eastern Wetlands	1.28	0.7449	0.29	5.74
C	Ashland HS, fields, path to Nyanza	NA (zero cell for exposure)			
D	Megunko Hill, two ponds on hill	1.98	0.4997	0.27	14.77
E	Western Wetlands, bb field, RR tracks	NA (zero cell for exposure)			
F	Sudbury River, near High St. bridge	0.71	0.2688	0.16	3.21
G	Sudbury River, Mill Pond, bb field	1.56	0.4372	0.50	4.86
H	Sudbury River, Myrtle Dam	1.39	0.6197	0.38	5.03
I	Stone Park	0.74	0.2324	0.20	2.68

Table 38: Analysis of Specific Areas on Map B in Which Participants Ever Swam/Wade and a Rare Cancer Diagnosis

Exposure Area	Relative Risk (exposed/non-exposed)	Chi-Square p-value	95% Confidence Interval	
Chemical or Purple Brook	4.09	0.1311	0.59	28.15
Chemical or Purple Brook and Family History	NA (zero cell)	0.8752 (f)		
Chemical or Purple Brook and No Family History	8.92		1.30	61.15
Megunko Hill ponds	**9.59**	**0.0061**	**1.53**	**59.94**
Megunko Hill ponds and Family History	**49.92**	**<0.0001**	**28.2**	**86.52**
Megunko Hill Ponds and No Family History	NA (zero cell)	0.9264 (f)		
Ponds near Nyanza, south of Pleasant Street	**17.14**	**<0.0001**	**4.96**	**59.21**
w/Family History	**26.82**	**<0.0001**	**8.56**	**83.98**
No Family History	NA (zero cell)			
Wetlands area behind Cherry Street	**19.22**	**<0.0001**	**3.69**	**99.96**
w/ Family History	**24.67**	**<0.0001**	**5.53**	**109.97**
No Family History	NA (zero cell)	0.9849		

Table 39: Table Analysis of Overall Water-Contact Exposure in Areas on Map B and Self-Reported Cancer Diagnosis

Water-Contact in Area (C3_C6)	Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.14	0.6909	0.61	2.12
B	Eastern Wetlands	1.13	0.6991	0.62	2.06
C	Ashland HS, fields, path to Nyanza	1.51	0.2133	0.79	2.87
D	**Megunko Hill and two ponds on hill**	**2.43**	**0.0411 (f)**	**1.11**	**5.33**
E	Western Wetlands, bb field, RR tracks	NA (zero cell)	1.000 (f)		
F	Sudbury River, near High St. bridge	0.95	0.8400	0.58	1.56
G	Sudbury River, Mill Pond, bb field	0.96	0.8696	0.61	1.51
H	Sudbury River, Myrtle Dam	1.38	0.2179	0.83	2.32
I	Stone Park	1.21	0.4307	0.75	1.95

Table 40: Table Analysis of Overall Water-Contact Exposure in Areas on Map B and Self-Reported Cancer Diagnosis Stratified by Family History of Cancer

Water-Contact in Area (C3_C6)	Family History of Cancer = Yes				Family History of Cancer = No			
	RR	Chi-Square p-value	95% CI		RR	Chi-Square p-value	95% CI	
A	1.32	0.4865	0.61	2.88	0.92	1.000 (f)	0.33	2.58
B	1.47	0.2832	0.73	2.99	0.64	0.6047 (f)	0.20	2.06
C	1.37	0.4405 (f)	0.60	3.13	1.56	0.3337 (f)	0.56	4.34
D	**3.03**	**0.0274 (f)**	**1.30**	**7.08**	1.06	1.000 (f)	0.15	7.44
E	NA (zero cell)	1.000 (f)			NA (zero cell)	1.000 (f)		
F	1.08	0.8207	0.58	2.00	0.73	0.4564	0.32	1.67
G	1.29	0.4045	0.71	2.33	0.62	0.1924	0.29	1.29
H	1.69	0.1205	0.90	3.16	0.90	0.8168	0.35	2.29
I	1.56	0.1414	0.86	2.84	0.76	0.5033	0.33	1.73

Table 41:   Table Analysis of Overall Water-Contact Exposure in Areas on Map B and Confirmed Cancer Diagnosis

Water-Contact in Area (C3_C6)	Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.62	0.2101	0.76	3.48
B	Eastern Wetlands	1.23	0.6115	0.55	2.75
C	Ashland HS, fields, path to Nyanza	1.37	0.4992	0.54	3.45
D	Megunko Hill and two ponds on hill	NA (zero cell)			
E	Western Wetlands, bb field, RR tracks	NA (zero cell)			
F	Sudbury River, near High St. bridge	0.69	0.3238	0.33	1.45
G	Sudbury River, Mill Pond, bb field	0.93	0.8196	0.49	1.74
H	**Sudbury River, Myrtle Dam**	**2.07**	**0.0257**	**1.08**	**3.98**
I	Stone Park	1.36	0.3524	0.71	2.58
H and Fam Hx	**Sudbury River, Myrtle Dam and positive Family History Cancer**	**3.63**	**0.0029**	**1.47**	**8.96**
H and No Fam Hx	Sudbury River, Myrtle Dam and No Family History of Cancer	1.09	0.8777	0.37	3.18

Table 42:   Table Analysis of Overall Water-Contact Exposure in Areas on Map B and Rare Cancer Diagnosis

Water-Contact in Area (C3_C6)	Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Site, waste ponds & lagoons	1.66	0.3060	0.63	4.38
B	Eastern Wetlands	1.88	0.1707	0.75	4.67
C	Ashland HS, fields, path to Nyanza	1.33	0.6358	0.40	4.16
D	Megunko Hill and two ponds on hill	1.16	0.8822	0.16	8.43
E	Western Wetlands, bb field, RR tracks	NA (zero cell)			
F	Sudbury River, near High St. bridge	0.95	0.9088	0.39	2.27
G	Sudbury River, Mill Pond, bb field	1.20	0.6467	0.54	2.66
H	Sudbury River, Myrtle Dam	1.38	0.4847	0.55	3.45
I	Stone Park	0.99	0.9953	0.42	2.38

Table 43: Table Analysis of Occupational History with Specific Sites and Tasks and Self-Reported Cancer Diagnosis

Ever Worked with (D2)	Employment	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Nyanza Chemical Company	1.58	0.4807 (f)	0.24	10.47
B	Derby Chemical Company	3.21	0.1295 (f)	0.89	11.60
C	Agriculture or Woodworking	0.68	0.3447	0.30	1.54
D	Any other w/contact in areas on map B	0.66	0.1505	0.37	1.17

Table 44: Table Analysis of Exposure to Materials used in an Occupational Setting and Self-Reported Cancer Diagnosis

Ever Used Material (D12)	Material Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
A	Mercury	1.08	0.7560 (f)	0.33	3.55
B	Cadmuim	NA (zero cell)	0.6279 (f)	X	X
C	Arsenic	NA (zero cell)	0.6218 (f)	X	X
D	Lead	0.57	0.4762 (f)	0.18	1.79
E	**Paints & products, thinner, remover**	**0.32**	**0.0076**	**0.13**	**0.79**
F	PERC, TetraCE, solvents	0.48	0.4290 (f)	0.12	1.90
G	TCE, triasol, carbona, trichlor	0.70	0.7952 (f)	0.22	2.16
H	245-T, Agent Orange	2.17	0.3799 (f)	0.34	13.98
I	Herbicides (not phenoxyherbicides)	1.02	1.000 (f)	0.26	4.00
J	Insecticides	1.21	0.6683	0.50	2.92
K	Pesticides	1.40	0.4742 (f)	0.46	4.28
L	Ionizing radiation, x-rays	0.65	0.6192 (f)	0.21	2.02
M	PVC	0.70	0.7953 (f)	0.22	2.16
N	Chlorinated chemicals	1.76	0.0623	0.97	3.20
0	Chemical dyes	2.24	0.0773 (f)	0.95	5.30
NO	**Cumulative chemical exposure**	**2.05**	**0.0083**	**1.20**	**3.49**

Table 45: Table Analysis of Exposure to Paint Products, Chlorinated Chemicals, Chemical Dyes, and Cumulative Chemical Exposure and Self-Reported Cancer Diagnosis Stratified by Family History of Cancer

Ever Used Material (D12)	Family History of Cancer = Yes				Family History of Cancer = No			
	RR	Chi-Square p-value	95% CI		RR	Chi-Square p-value	95% CI	
E	0.37	0.0278 (f)	0.10	.97	0.32	0.1451 (f)	0.08	1.33
N	2.26	0.0214	1.13	4.52	1.02	1.000 (f)	0.32	3.29
O	2.25	0.1551 (f)	0.76	6.69	2.18	0.2460 (f)	0.55	8.64
NO	2.32	0.0110	1.21	4.43	1.56	0.3682 (f)	0.62	4.06

Table 46: Logistic Regression Analysis of Cumulative Chemical Exposure, Water-Contact Exposure in Area D, and Family History of Cancer on Self-Reported Cancer Diagnosis

Logistic Regression Model Covariates	Max Likelihood Estimate	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
Overall Model	NA	NA	0.0007	NA	NA
Cumulative Chemical Exposure	0.3768	2.13	0.0121	1.18	3.83
Water-Contact in Area D	0.4452	2.44	0.0531	0.99	6.01
Family History of Cancer	0.3015	1.83	0.0166	1.12	2.99

Table 47: Table Analysis of Exposure to Agricultural Treatment and Pest Management and Self-Reported Cancer Diagnosis

Ever Used Treatment	Description of Agricultural Treatment or Pest Management	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
B10a	Pest or insecticide spraying inside home	0.90	0.6453	0.57	1.41
B11a	Insecticide or herbicide treatment on yard	1.03	0.8964	0.66	1.61
B12a	Tree or agricultural spraying near home	0.92	0.7576	0.54	1.57
B13a	Mosquito spraying or fogging near home	1.11	0.7387	0.61	2.03

Table 48: Table Analysis of Exposure to Agricultural Treatment and Pest Management and Self-Reported Cancer Diagnosis Stratified by Family History of Cancer

Ever Used Treatment	Family History of Cancer = Yes				Family History of Cancer = No			
	RR	Chi-Square p-value	95% CI		RR	Chi-Square p-value	95% CI	
B10a	0.96	0.9016	0.54	1.73	0.80	0.5257	0.39	1.62
B11a	0.93	0.8118	0.52	1.67	1.05	0.8923	0.52	2.11
B12a	0.73	0.3981	0.34	1.54	1.22	0.6062	0.57	2.64
B13a	0.83	0.6102	0.41	1.68	1.94	0.2574	0.60	6.33

Table 49: Logistic Regression Analysis of Duration of Agricultural Treatment and Pest Management on Self-Reported Cancer Diagnosis

Models of Duration of Txt + Family History of Cancer	Max Likelihood Estimate	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
B10b	0.0093	1.01	0.6354	0.97	1.05
B11b	0.0164	1.02	0.4128	0.98	1.06
B12b	**0.0500**	**1.05**	**0.0118**	**1.01**	**1.09**
B13b	0.0208	1.02	0.1653	0.99	1.05

Table 50: Logistic Regression Analysis of Duration of Tree or Agricultural Spraying with Cumulative Chemical Exposure, Water-Contact Exposure in Area D, and Family History of Cancer on Self-Reported Cancer Diagnosis

Logistic Regression Covariates	Max Likelihood Estimate	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
Overall Model	**NA**	**NA**	**0.0015**	**NA**	**NA**
Duration of Tree or Agric Spraying	**0.0532**	**1.06**	**0.0089**	**1.01**	**1.10**
Cumulative Chemical Exposure	0.2652	1.70	0.4246	0.46	6.25
Water-Contact in Area D	**1.2490**	**12.16**	**0.0006**	**2.90**	**51.01**
Family History of Cancer	-0.0841	0.85	0.7827	0.26	2.79

Table 51: Logistic Regression Analysis of Frequency of Agricultural Treatment and Pest Management on Self-Reported Cancer Diagnosis

Models of Frequency of Txt + Family History of Cancer	Max Likelihood Estimate	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
B10c	0.4284	1.54	0.1595	0.85	2.79
B11c	0.0844	1.09	0.7986	0.57	2.08
B12c	-0.2298	0.80	0.7212	0.23	2.81
B13c	-0.1890	0.83	0.6918	0.33	2.11

Table 52: Logistic Regression Analysis of Duration of Cumulative Tree or Agricultural Spraying with Cumulative Chemical Exposure, Water-Contact Exposure in Area D, and Family History of Cancer on Self-Reported Cancer Diagnosis

Logistic Regression Model Covariates	Max Likelihood Estimate	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
Overall Model	**NA**	**NA**	**0.0008**	**NA**	**NA**
Cumulative Tree or Agric Spraying	**0.0347**	**1.04**	**0.0145**	**1.01**	**1.07**
Cumulative Chemical Exposure	0.2665	1.70	0.4261	0.46	6.33
Water-Contact in Area D	**1.2702**	**12.69**	**0.0004**	**3.08**	**52.18**
Family History of Cancer	-0.0366	0.93	0.9030	0.29	3.01

Table 53: **Table Analysis of Residential Exposure to the Nyanza Site and Self-Reported Cancer Diagnosis**

Variable	Variable Description	RR (Exp/Non-exp)	Chi-Square p-value	95% CI	
Residential Exposure	Ever / never lived in exposed area for at least 2 years	1.07	0.8579	0.50	2.29

Table 54: **Table Analysis of Residential Exposure to the Nyanza Site and Self-Reported Cancer Diagnosis Stratified by Gender and Family History of Cancer**

Residential Exposure Stratified	Stratum = Yes or Gender = Male				Stratum = No or Gender = Female			
	RR	Chi-Square p-value	95% CI		RR	Chi-Square p-value	95% CI	
By Gender	0.94	1.000 (f)	0.23	3.91	1.15	0.7947 (f)	0.47	2.81
By Family History	1.23	0.5936 (f)	0.50	3.01	0.76	1.000 (f)	0.19	3.13

Table 55: **Logistic Regression Analyses of Residential Exposure to the Nyanza Site and Self-eported Cancer Diagnosis**

Logistic Regression Outcome = Self-Reported Cancer Diagnosis Model Covariates Below	Odds Ratio Point Estimate	Chi-Square p-value (Wald)	95% CI	
Overall Model	NA	**0.0326**	NA	NA
Residential Exposure	1.05	0.9100	0.47	2.35
Study Age	1.01	0.8097	0.96	1.05
Family History	**0.53**	**0.0112**	**0.32**	**0.86**
Gender	1.62	0.0676	0.97	2.71
Overall Model & Duration of Exposure	1.04	0.4459	0.940	1.15
Overall Model	NA	0.6316	NA	NA
Duration of Exposure	1.04	0.4570	0.94	1.16
Study Age	1.01	0.9150	0.87	1.16
Gender	0.54	0.4869	0.10	3.07
Familiy History	2.75	0.2489	0.49	15.45