

## SUPPLEMENTAL DIGITAL CONTENT

### Adult Cancers Near High-Voltage Overhead Power Lines

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**eTable 1.** International classification of disease (ICD) codes of (a) case cancers; (b) control cancers and numbers included by cancer type, according to eighth, ninth and tenth revisions of the ICD

**eTable 2.** Cancer risk by distance (m), (a) year of diagnosis; (b) 5 years prior to year of diagnosis

**eTable 3.** Cancer risk by estimated magnetic field (nT), (a) year of diagnosis; (b) 5 years prior to year of diagnosis

**eTable 4.** Females aged 15-74 years living within 1000 m of a power line included in the Office for National Statistics Longitudinal Study: Migration between 1991-2001 a) *out of* and b) *into* areas by distance from powerlines: all females, those with registered breast cancer, and those with registered control cancers; c) Numbers (%) of females by social class based on occupation and by distance from powerlines 2001.

**eTable 1. International Classification of Disease (ICD) Codes of (a) Case Cancers; (b) Control Cancers and Numbers Included by Cancer Type, According to Eighth, Ninth and Tenth Revisions of the ICD**

<b>(a)</b>			
<b>Cancer</b>	<b>ICD-10 codes</b>	<b>ICD-9 codes</b>	<b>ICD-8 codes</b>
Leukemia	C91% Lymphoid leukemia C92% Myeloid leukemia C93% Monocytic leukemia C94% Other leukemias of specified cell type C95% Leukemia of unspecified cell type	202.4 Leukemic reticuloendotheliosis 204% Lymphoid leukemia 205% Myeloid leukemia 206% Monocytic leukemia 207% Other specified leukemia 208% Leukemia of unspecified cell type	204% Lymphatic leukemia 205% Myeloid leukemia 206% Monocytic leukemia 207% Other and unspecified leukemia 209 Myelofibrosis
Brain/central nervous system cancer	C70% Malignant neoplasm of meninges C71% Malignant neoplasm of brain C72% Malignant neoplasm of spinal cord, cranial nerves and other parts of central nervous system	191% Malignant neoplasm of brain 192% Malignant neoplasm of other and unspecified parts of nervous system	191 Malignant neoplasm of brain 192.0 Cranial nerves 192.1 Cerebral meninges 192.2 Spinal cord 192.3 Spinal meninges 192.9 Site unspecified

**eTable 1 continued**

<b>(a)</b>			
<b>Cancer</b>	<b>ICD-10 codes</b>	<b>ICD-9 codes</b>	<b>ICD-8 codes</b>
Malignant melanoma	C43% Malignant melanoma of skin	172% Malignant melanoma of skin	172% Malignant melanoma of skin
Female breast cancer	C50% Malignant neoplasm of breast	174% Malignant neoplasm of female breast	174% Malignant neoplasm of breast

**eTable 1 continued**

<b>(b)</b>							
<b>Cancer</b>	<b>ICD-10 codes</b>	<b>ICD-9 codes</b>	<b>ICD-8 codes</b>	<b>Numbers included as controls in analyses of:</b>			
				<b>Leukemia</b>	<b>Brain/Central Nervous System</b>	<b>Malignant melanoma</b>	<b>Female breast</b>
Oesophagus	C15% Malignant neoplasm of oesophagus	150% Malignant neoplasm of oesophagus	150 Malignant neoplasms of oesophagus	1100 (4.69%)	888 (4.37%)	1217 (4.43%)	996 (3.41%)
Stomach	C16% Malignant neoplasm of stomach	151% Malignant neoplasm of stomach	151% Malignant neoplasm of stomach	2095 (8.93%)	1827 (8.98%)	2047 (7.45%)	1743 (5.97%)
Small intestine	C17% Malignant neoplasm of small intestine	152% Malignant neoplasm of small intestine, including duodenum	152% Malignant neoplasm of small intestine, including duodenum	113 (0.48%)	103 (0.51%)	157 (0.57%)	172 (0.59%)
Colon	C18% Colon	153% Malignant neoplasm of colon	153% Malignant neoplasm of large intestine, except rectum	3364 (14.33%)	2933 (14.42%)	3905 (14.22%)	4814 (16.49%)

**eTable 1 continued**

<p>Rectum, rectosigmoid joint and anus</p>	<p>C19% Malignant neoplasm of rectosigmoid junction C20% Malignant neoplasm of rectum C21% Malignant neoplasm of anus and anal canal</p>	<p>154% Malignant neoplasm of rectum, rectosigmoid junction, and anus</p>	<p>154% Malignant neoplasm of rectum and rectosigmoid junction</p>	<p>2403 (10.24%)</p>	<p>2040 (10.03%)</p>	<p>2859 (10.41%)</p>	<p>2739 (9.38%)</p>
<p>Biliary passages and liver</p>	<p>C22% Malignant neoplasm of liver and intrahepatic bile ducts C24% Malignant neoplasm of other and unspecified parts of biliary tract</p>	<p>155% Malignant neoplasm of liver and intrahepatic bile ducts  156.1 Extrahepatic bile ducts  156.2 Ampulla of Vater 156.8 Other specified sites of gallbladder and extrahepatic bile ducts 156.9 Biliary tract, part unspecified</p>	<p>155% Malignant neoplasm of liver and intrahepatic bile ducts, specified as primary  156.1 Extrahepatic bile ducts  156.2 Ampulla of Vater  156.9 Biliary tract, part unspecified</p>	<p>502 (2.14%)</p>	<p>440 (2.16%)</p>	<p>588 (2.14%)</p>	<p>578 (1.98%)</p>

**eTable 1 continued**

Gallbladder	C23 Malignant neoplasm of gallbladder	156.0 Gallbladder	156.0 Gallbladder	96 (0.41%)	109 (0.54%)	108 (0.39%)	203 (0.7%)
Pancreas	C25% Malignant neoplasm of pancreas	157% Malignant neoplasm of pancreas	157% Malignant neoplasm of pancreas	1257 (5.36%)	1106 (5.44%)	1362 (4.96%)	1625 (5.56%)
Other digestive organs, inc spleen	C26% Malignant neoplasm of other and ill-defined digestive organs	159% Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum	159% Malignant neoplasm of unspecified digestive organs	71 (0.3%)	88 (0.43%)	87 (0.32%)	104 (0.36%)
Heart, mediastinum and pleura	C38% Malignant neoplasm of heart, mediastinum and pleura	163% Malignant neoplasm of pleura 164.1 Heart 164.2 Anterior mediastinum 164.3 Posterior mediastinum 164.8 Other 164.9 Mediastinum, part unspecified	163% Malignant neoplasm of other and unspecified respiratory organs	174 (0.74%)	152 (0.75%)	173 (0.63%)	97 (0.33%)

**eTable 1 continued**

Other respiratory system organs	C39% Malignant neoplasm of other and ill-defined sites in the respiratory system and intrathoracic organs	165% Malignant neoplasm of other and ill-defined sites within the respiratory system and intrathoracic organs	163% Malignant neoplasm of other and unspecified respiratory organs	2 (0.01%)	1 (0%)	3 (0.01%)	2 (0.01%)
Bones and articular cartilage	C40%-C41% Malignant neoplasms of bone and articular cartilage	170% Malignant neoplasm of bone and articular cartilage	170% Malignant neoplasm of bone	109 (0.46%)	97 (0.48%)	115 (0.42%)	112 (0.38%)
Mesothelioma, Kaposi's sarcoma, peripheral nerves, peritoneum, connective and soft tissues	C45%-C49% Malignant neoplasms of mesothelial and soft tissue	158% Malignant neoplasm of retroperitoneum and peritoneum  171% Malignant neoplasm of connective and other soft tissue  Kaposi's sarcoma:  176.0 Skin  176.1 Soft tissue  176.2 Palate	158% Malignant neoplasm of peritoneum and retroperitoneal tissue 171% Malignant neoplasm of connective and other soft tissue 192.4 Peripheral nerves 192.5 Sympathetic nervous system	561 (2.39%)	518 (2.55%)	719 (2.62%)	681 (2.33%)

**eTable 1 continued**

		176.5 Lymph nodes					
		176.8 Other specified sites					
		176.9 Unspecified					
Female genital organs (excl corpus uteri)	<p>C51% Malignant neoplasm of vulva</p> <p>C52% Malignant neoplasm of vagina</p> <p>C53% Malignant neoplasm of cervix uteri</p> <p>C55% Malignant neoplasm of uterus, part unspecified</p> <p>C56% Malignant neoplasm of ovary</p> <p>C57% Malignant neoplasm of other and unspecified female genital organs</p>	<p>179 Malignant neoplasm of uterus, part unspecified</p> <p>180% Malignant neoplasm of cervix uteri</p> <p>181 Malignant neoplasm of placenta</p> <p>183% Malignant neoplasm of ovary and other uterine adnexa</p> <p>184% Malignant neoplasm of other and unspecified female genital organs</p>	<p>180% Malignant neoplasm of cervix uteri</p> <p>181% Chorionepithelioma</p> <p>183% Malignant neoplasm of ovary, fallopian tube, and broad ligament</p>	2766 (11.79%)	2554 (12.55%)	3077 (11.21%)	8396 (28.75%)



**eTable 1 continued**

	C58% Malignant neoplasm of placenta		184% Malignant neoplasm of other and unspecified female genital organs				
Corpus uteri	C54% Corpus uteri	182% Malignant neoplasm of body of uterus	182% Other malignant neoplasm of uterus	1117 (4.76%)	965 (4.74%)	1333 (4.85%)	3455 (11.83%)
Male genital organs (excl testis and prostate)	C60% Malignant neoplasm of penis C63% Malignant neoplasm of other and unspecified male genital organs	187% Malignant neoplasm of penis and other male genital organs	187% Malignant neoplasm of other and unspecified male genital organs	81 (0.35%)	79 (0.39%)	100 (0.36%)	0 (0%)
Prostate	C61% Malignant neoplasm of prostate	185% Malignant neoplasm of prostate	185% Malignant neoplasm of prostate	3601 (15.34%)	2924 (14.37%)	4763 (17.35%)	0 (0%)
Testicular cancer	C62% Malignant neoplasm of testis	186% Malignant neoplasm of testis	186 Malignant neoplasm of testis	446 (1.9%)	402 (1.98%)	588 (2.14%)	0 (0%)

**eTable 1 continued**

Kidney	C64 Malignant neoplasm of kidney, except renal pelvis	189.0 Kidney, except pelvis	189.0 Kidney, except pelvis	980 (4.18%)	871 (4.28%)	1263 (4.6%)	1045 (3.58%)
Urinary organs excl kidney	C65%-C68% Bladder and urinary organs, excl kidney	188% Malignant neoplasm of bladder 189.1 Renal pelvis 189.2 Ureter 189.3 Urethra 189.4 Paraurethral glands 189.8 Other specified sites of urinary organs 189.9 Urinary organ, site unspecified	188 Malignant neoplasm of bladder 189.1 Pelvis of kidney 189.2 Ureter 189.9 Other and unspecified	2182 (9.3%)	1838 (9.04%)	2450 (8.92%)	1602 (5.49%)
Eye	C69% Malignant neoplasm of eye and adnexa	190% Malignant neoplasm of eye	190 Malignant neoplasm of eye	102 (0.43%)	90 (0.44%)	126 (0.46%)	125 (0.43%)
Thyroid gland	C73 Malignant neoplasm of thyroid gland	193 Malignant neoplasm of thyroid gland	193 Malignant neoplasm of thyroid gland	279 (1.19%)	266 (1.31%)	359 (1.31%)	645 (2.21%)

**eTable 1 continued**

Glands (excl pituitary and thyroid)	C74% Malignant neoplasm of adrenal gland	194.0 Adrenal gland	194.0 Suprarenal gland	50 (0.21%)	41 (0.2%)	50 (0.18%)	58 (0.2%)
	C75.0 Parathyroid gland	194.1 Parathyroid gland	194.1 Parathyroid gland				
	C75.2.Craniopharyngeal duct	194.4 Pineal gland	194.4 Pineal gland				
	C75.3 Pineal gland	194.5 Carotid body	194.8 Other				
	C75.4 Carotid body	194.6 Aortic body and other paraganglia	194.9 Endocrine gland, site unspecified				
	C75.5 Aortic body and other paraganglia	194.8 Other					
	C75.8 Pluriglandular involvement, unspecified	194.9 Endocrine gland, site unspecified					
	C75.9 Endocrine gland, unspecified						
Pituitary gland	C75.1 Pituitary gland	194.3 Pituitary gland and craniopharyngeal duct	194.3 Pituitary gland and craniopharyngeal duct	18 (0.08%)	11 (0.05%)	10 (0.04%)	10 (0.03%)
<b>TOTAL</b>				23469	20343	27459	29202

**eTable 2. Cancer Risk by Distance (m)**  
**(a) Year of Diagnosis; (b) 5 Years Prior to Year of Diagnosis**

(a)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Leukemia</i>						
<b>0-49</b>	65	168	1.18	(0.88-1.57)	1.11	(0.83-1.48)
<b>50-99</b>	145	353	1.25	(1.03-1.52)	1.19	(0.98-1.45)
<b>100-199</b>	361	1147	0.96	(0.85-1.09)	0.93	(0.82-1.05)
<b>200-299</b>	568	1547	1.12	(1.01-1.24)	1.11	(1.00-1.23)
<b>300-399</b>	644	1959	1.00	(0.91-1.10)	1.00	(0.90-1.10)
<b>400-499</b>	802	2394	1.02	(0.94-1.11)	1.02	(0.93-1.11)
<b>500-599</b>	903	2678	1.03	(0.95-1.12)	1.03	(0.95-1.12)
<b>600-1000</b>	4335	13223	1.00		1.00	
<b>TOTAL</b>	7823	23469				
<i>P-value (trend, categories)</i>			0.083		0.280	
<i>P-value (trend, inverse rank of distance)</i>			0.070		0.295	
<i>P-value (trend, inverse of distance squared)</i>			0.178		0.193	

eTable 2 continued

(a)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Brain/central nervous system cancer</i>						
<b>0-49</b>	59	130	1.38	(1.01-1.88)	1.22	(0.88-1.69)
<b>50-99</b>	119	313	1.15	(0.93-1.43)	1.03	(0.83-1.29)
<b>100-199</b>	346	984	1.07	(0.94-1.21)	1.04	(0.91-1.19)
<b>200-299</b>	455	1488	0.93	(0.83-1.04)	0.90	(0.81-1.01)
<b>300-399</b>	602	1710	1.07	(0.97-1.18)	1.08	(0.98-1.20)
<b>400-499</b>	713	2120	1.02	(0.93-1.12)	1.00	(0.91-1.10)
<b>500-599</b>	809	2446	1.00	(0.92-1.09)	1.03	(0.94-1.13)
<b>600-1000</b>	3678	11152	1.00		1.00	
<b>TOTAL</b>	6781	20343				
<i>P-value (trend, categories)</i>			0.231		0.657	
<i>P-value (trend, inverse rank of distance)</i>			0.171		0.696	
<i>P-value (trend, inverse of distance squared)</i>			0.490		0.657	

eTable 2 continued

(a)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Malignant melanoma</i>						
<b>0-49</b>	66	213	0.94	(0.71-1.24)	0.82	(0.61-1.11)
<b>50-99</b>	168	392	1.30	(1.08-1.56)	1.07	(0.88-1.31)
<b>100-199</b>	478	1368	1.06	(0.95-1.18)	0.98	(0.87-1.10)
<b>200-299</b>	621	1840	1.02	(0.93-1.13)	0.97	(0.88-1.08)
<b>300-399</b>	793	2355	1.02	(0.94-1.11)	0.98	(0.90-1.08)
<b>400-499</b>	923	2852	0.98	(0.90-1.06)	0.95	(0.87-1.04)
<b>500-599</b>	1101	3288	1.01	(0.94-1.09)	1.02	(0.94-1.10)
<b>600-1000</b>	5003	15151	1.00		1.00	
<b>TOTAL</b>	9153	27459				
<i>P-value (trend, categories)</i>			0.158		0.406	
<i>P-value (trend, inverse rank of distance)</i>			0.114		0.311	
<i>P-value (trend, inverse of distance squared)</i>			0.341		0.304	

eTable 2 continued

(a)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Female breast cancer (50% sample)</i>						
<b>0-49</b>	259	243	1.08	(0.91-1.29)	1.01	(0.85-1.21)
<b>50-99</b>	458	448	1.04	(0.91-1.18)	0.99	(0.87-1.14)
<b>100-199</b>	1467	1342	1.11	(1.03-1.20)	1.07	(0.98-1.15)
<b>200-299</b>	2041	2041	1.02	(0.95-1.08)	1.00	(0.93-1.06)
<b>300-399</b>	2524	2481	1.03	(0.97-1.10)	1.03	(0.97-1.10)
<b>400-499</b>	3055	2904	1.07	(1.01-1.13)	1.06	(1.00-1.12)
<b>500-599</b>	3337	3435	0.99	(0.94-1.04)	0.99	(0.94-1.04)
<b>600-1000</b>	16061	16308	1.00		1.00	
<b>TOTAL</b>	29202	29202				
<i>P-value (trend, categories)</i>			0.009		0.145	
<i>P-value (trend, inverse rank of distance)</i>			0.007		0.161	
<i>P-value (trend, inverse of distance squared)</i>			0.269		0.193	

eTable 2 continued

(a)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Female breast cancer (100% of cases)</i>						
<b>0-49</b>	527	445	1.16	(1.02-1.31)	1.07	(0.93-1.24)
<b>50-99</b>	924	830	1.09	(0.99-1.20)	1.03	(0.93-1.14)
<b>100-199</b>	2963	2670	1.08	(1.03-1.14)	1.04	(0.98-1.11)
<b>200-299</b>	4124	3957	1.02	(0.97-1.07)	0.99	(0.94-1.05)
<b>300-399</b>	5044	4768	1.03	(0.99-1.08)	1.02	(0.98-1.07)
<b>400-499</b>	6031	5800	1.02	(0.98-1.06)	1.00	(0.96-1.05)
<b>500-599</b>	6672	6672	0.98	(0.94-1.01)	0.97	(0.93-1.01)
<b>600-1000</b>	32119	31374	1.00		1.00	
<b>TOTAL</b>	58404	56516				
<i>P-value (trend, categories)</i>			0.001		0.217	
<i>P-value (trend, inverse rank of distance)</i>			<0.001		0.109	
<i>P-value (trend, inverse of distance squared)</i>			0.791		0.507	



**eTable 2.**  
**Cancer Risk by Distance (m): (b) 5 Years Prior to Year of Diagnosis**

(b)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Leukemia</i>						
<b>0-49</b>	65	168	1.18	(0.88-1.58)	1.10	(0.82-1.48)
<b>50-99</b>	142	352	1.23	(1.01-1.50)	1.17	(0.96-1.43)
<b>100-199</b>	354	1140	0.95	(0.84-1.07)	0.92	(0.81-1.04)
<b>200-299</b>	561	1531	1.12	(1.01-1.24)	1.11	(1.00-1.23)
<b>300-399</b>	636	1931	1.01	(0.91-1.11)	1.00	(0.91-1.10)
<b>400-499</b>	796	2358	1.03	(0.94-1.12)	1.03	(0.94-1.12)
<b>500-599</b>	889	2642	1.03	(0.94-1.12)	1.03	(0.95-1.12)
<b>600-1000</b>	4270	13030	1.00		1.00	
<b>TOTAL</b>	7713	23152				
<i>P-value (trend, categories)</i>			0.104		0.309	
<i>P-value (trend, inverse rank of distance)</i>			0.095		0.343	
<i>P-value (trend, inverse of distance squared)</i>			0.178		0.193	

eTable 2 continued

(b)	Number of Cases	Number of Controls	Unadjusted*		Adjusted**	
			OR	95% CI	OR	95% CI
<i>Brain/central nervous system cancer</i>						
<b>0-49</b>	58	130	1.35	(0.99-1.85)	1.19	(0.86-1.65)
<b>50-99</b>	119	310	1.17	(0.94-1.44)	1.04	(0.84-1.31)
<b>100-199</b>	343	980	1.06	(0.93-1.21)	1.04	(0.91-1.18)
<b>200-299</b>	449	1474	0.92	(0.83-1.03)	0.90	(0.80-1.02)
<b>300-399</b>	596	1688	1.07	(0.97-1.19)	1.09	(0.98-1.21)
<b>400-499</b>	708	2084	1.03	(0.94-1.13)	1.01	(0.92-1.11)
<b>500-599</b>	791	2410	1.00	(0.91-1.09)	1.03	(0.94-1.13)
<b>600-1000</b>	3626	11006	1.00		1.00	
<b>TOTAL</b>	6690	20082				
<i>P-value (trend, categories)</i>			0.221		0.619	
<i>P-value (trend, inverse rank of distance)</i>			0.164		0.673	
<i>P-value (trend, inverse of distance squared)</i>			0.490		0.672	

eTable 2 continued

(b)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Malignant melanoma</i>						
<b>0-49</b>	66	212	0.94	(0.71-1.25)	0.83	(0.61-1.13)
<b>50-99</b>	166	391	1.29	(1.07-1.55)	1.07	(0.87-1.31)
<b>100-199</b>	474	1356	1.06	(0.95-1.18)	0.97	(0.86-1.09)
<b>200-299</b>	618	1829	1.02	(0.93-1.13)	0.96	(0.86-1.06)
<b>300-399</b>	788	2337	1.02	(0.94-1.11)	0.97	(0.89-1.07)
<b>400-499</b>	916	2831	0.98	(0.90-1.06)	0.95	(0.87-1.04)
<b>500-599</b>	1092	3265	1.01	(0.94-1.09)	1.02	(0.94-1.11)
<b>600-1000</b>	4966	15038	1.00		1.00	
<b>TOTAL</b>	9086	27259				
<i>P-value (trend, categories)</i>			0.161		0.403	
<i>P-value (trend, inverse rank of distance)</i>			0.116		0.294	
<i>P-value (trend, inverse of distance squared)</i>			0.343		0.297	

**eTable 2 continued**

<b>(b)</b>	<b>Number</b>	<b>Number of</b>	<b>Unadjusted*</b>		<b>Adjusted**</b>	
<b>Distance (m)</b>	<b>of Cases</b>	<b>Controls</b>	<b>OR</b>	<b>95% CI</b>	<b>OR</b>	<b>95% CI</b>
<i>Female breast cancer (50% Sample)</i>						
<b>0-49</b>	259	241	1.09	(0.92-1.30)	1.02	(0.86-1.23)
<b>50-99</b>	456	446	1.04	(0.91-1.19)	1.00	(0.87-1.14)
<b>100-199</b>	1452	1334	1.11	(1.02-1.20)	1.06	(0.98-1.15)
<b>200-299</b>	2018	2019	1.02	(0.95-1.08)	1.00	(0.93-1.07)
<b>300-399</b>	2511	2447	1.04	(0.98-1.11)	1.04	(0.98-1.11)
<b>400-499</b>	3018	2863	1.07	(1.01-1.13)	1.06	(1.00-1.12)
<b>500-599</b>	3296	3381	0.99	(0.94-1.04)	0.99	(0.94-1.04)
<b>600-1000</b>	15858	16117	1.00		1.00	
<b>TOTAL</b>	28868	28848				
<i>P-value (trend, categories)</i>			0.006		0.108	
<i>P-value (trend, inverse rank of distance)</i>			0.006		0.128	
<i>P-value (trend, inverse of distance squared)</i>			0.269		0.187	

eTable 2 continued

(b)	Number	Number of	Unadjusted*		Adjusted**	
Distance (m)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Female breast cancer (100% Sample)</i>						
<b>0-49</b>	525	443	1.16	(1.02-1.31)	1.08	(0.94-1.24)
<b>50-99</b>	920	822	1.09	(0.99-1.20)	1.04	(0.93-1.15)
<b>100-199</b>	2935	2651	1.08	(1.02-1.14)	1.04	(0.98-1.11)
<b>200-299</b>	4083	3917	1.02	(0.97-1.07)	0.99	(0.94-1.05)
<b>300-399</b>	5004	4699	1.04	(1.00-1.09)	1.03	(0.98-1.08)
<b>400-499</b>	5941	5715	1.02	(0.98-1.06)	1.00	(0.96-1.05)
<b>500-599</b>	6603	6577	0.98	(0.94-1.02)	0.98	(0.94-1.02)
<b>600-1000</b>	31715	30980	1.00		1.00	
<b>TOTAL</b>	57726	55804				
<i>P-value (trend, categories)</i>			0.001		0.169	
<i>P-value (trend, inverse rank of distance)</i>			<0.001		0.086	
<i>P-value (trend, inverse of distance squared)</i>			0.780		0.500	

\* Stratified by year and region

\*\* Stratified by year and region, adjusted for age and sex (except female breast cancer), deprivation and rurality.

**eTable 3. Cancer Risk by Estimated Magnetic Field (nT)**

**(a) Year of Diagnosis; (b) 5 Years Prior to Year of Diagnosis**

(a)	Number	Number of	Unadjusted*		Adjusted**	
Magnetic field (nT)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Leukemia</i>						
≥1000	16	40	1.20	(0.67-2.14)	1.03	(0.57-1.86)
400-999	23	72	0.96	(0.60-1.53)	0.91	(0.57-1.46)
300-399	12	29	1.24	(0.63-2.43)	1.19	(0.60-2.36)
200-299	22	51	1.29	(0.78-2.13)	1.22	(0.74-2.02)
100-199	44	106	1.25	(0.88-1.77)	1.19	(0.83-1.70)
<100	7362	22082	1.00		1.00	
<b>TOTAL</b>	7479	22380				
<i>P-value (trend, categories)</i>			0.411		0.818	
<i>P-value (trend, continuous measure)</i>			0.961		0.662	
<i>Brain/central nervous system cancer</i>						
≥1000	9	28	0.97	(0.46-2.05)	1.02	(0.47-2.22)
400-999	20	61	0.99	(0.60-1.64)	0.92	(0.54-1.55)
300-399	12	25	1.45	(0.73-2.88)	1.36	(0.66-2.81)
200-299	15	45	1.00	(0.56-1.80)	0.98	(0.53-1.78)
100-199	44	104	1.27	(0.90-1.82)	1.10	(0.76-1.59)
<100	6354	19146	1.00		1.00	
<b>TOTAL</b>	6454	19409				
<i>P-value (trend, categories)</i>			0.782		0.902	
<i>P-value (trend, continuous measure)</i>			0.982		0.810	

eTable 3 continued

(a)	Number	Number of	Unadjusted*		Adjusted**	
Magnetic field (nT)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Malignant melanoma</i>						
≥1000	19	74	0.77	(0.47-1.28)	0.68	(0.39-1.17)
400-999	34	87	1.18	(0.79-1.75)	1.17	(0.75-1.81)
300-399	18	46	1.18	(0.68-2.04)	0.87	(0.47-1.59)
200-299	18	58	0.94	(0.55-1.59)	0.74	(0.42-1.33)
100-199	44	123	1.08	(0.76-1.52)	0.98	(0.67-1.44)
<100	8566	25827	1.00		1.00	
<b>TOTAL</b>	8699	26215				
<i>P-value (trend, categories)</i>			0.645		0.177	
<i>P-value (trend, continuous measure)</i>			0.400		0.087	
<i>Female breast cancer (50% sample)</i>						
≥1000	74	66	1.13	(0.81-1.57)	1.08	(0.77-1.51)
400-999	89	83	1.08	(0.80-1.45)	1.06	(0.78-1.43)
300-399	43	50	0.86	(0.57-1.30)	0.86	(0.57-1.30)
200-299	68	78	0.88	(0.63-1.21)	0.80	(0.58-1.12)
100-199	142	137	1.04	(0.82-1.32)	0.97	(0.77-1.24)
<100	27427	27532	1.00		1.00	
<b>TOTAL</b>	27843	27946				
<i>P-value (trend, categories)</i>			0.536		0.832	
<i>P-value (trend, continuous measure)</i>			0.666		0.420	

eTable 3 continued

(b) Cancer Risk by Estimated Magnetic Field (nT), 5 years Prior to Year of Diagnosis

Magnetic field (nT)	Number of Cases	Number of Controls	Unadjusted*		Adjusted**	
			OR	95% CI	OR	95% CI
<i>Leukemia</i>						
≥1000	15	35	1.28	(0.70-2.35)	1.07	(0.58-1.98)
400-999	17	67	0.76	(0.45-1.29)	0.75	(0.44-1.28)
300-399	8	28	0.86	(0.39-1.88)	0.80	(0.36-1.77)
200-299	19	51	1.12	(0.66-1.89)	1.07	(0.63-1.82)
100-199	41	99	1.24	(0.86-1.79)	1.21	(0.83-1.74)
<100	7274	21785	1.00		1.00	
<b>TOTAL</b>						
<i>P-value (trend, categories)</i>			0.676		0.867	
<i>P-value (trend, continuous measure)</i>			0.923		0.666	
<i>Brain/central nervous system cancer</i>						
≥1000	11	24	1.38	(0.68-2.82)	1.45	(0.69-3.06)
400-999	18	54	1.01	(0.59-1.72)	1.01	(0.58-1.75)
300-399	13	26	1.51	(0.77-2.94)	1.16	(0.58-2.32)
200-299	14	41	1.03	(0.56-1.89)	1.02	(0.55-1.90)
100-199	37	93	1.20	(0.82-1.76)	1.05	(0.71-1.57)
<100	6271	18915	1.00		1.00	
<b>TOTAL</b>						
<i>P-value (trend, categories)</i>			0.267		0.334	
<i>P-value (trend, continuous measure)</i>			0.243		0.391	



eTable 3 continued

(b)	Number	Number of	Unadjusted*		Adjusted**	
Magnetic field (nT)	of Cases	Controls	OR	95% CI	OR	95% CI
<i>Malignant melanoma</i>						
≥1000	18	55	0.99	(0.58-1.68)	0.84	(0.47-1.51)
400-999	19	95	0.60	(0.37-0.99)	0.59	(0.35-1.01)
300-399	18	33	1.64	(0.93-2.92)	1.31	(0.69-2.49)
200-299	24	67	1.08	(0.68-1.72)	0.79	(0.47-1.35)
100-199	42	120	1.05	(0.74-1.50)	1.01	(0.68-1.48)
<100	8511	25646	1.00		1.00	
<b>TOTAL</b>	8632	26016				
<i>P-value (trend, categories)</i>			0.583		0.165	
<i>P-value (trend, continuous measure)</i>			0.303		0.087	
<i>Female breast cancer</i>						
≥1000	55	61	0.90	(0.63-1.30)	0.87	(0.60-1.26)
400-999	104	82	1.27	(0.95-1.70)	1.27	(0.94-1.70)
300-399	34	41	0.83	(0.53-1.31)	0.77	(0.49-1.23)
200-299	57	72	0.79	(0.56-1.13)	0.72	(0.51-1.03)
100-199	136	106	1.29	(1.00-1.66)	1.23	(0.95-1.59)
<100	27130	27229	1.00		1.00	
<b>TOTAL</b>	27516	27591				
<i>P-value (trend, categories)</i>			0.886		0.827	
<i>P-value (trend, continuous measure)</i>			0.764		0.496	

### **eTable 3 continued**

\* Stratified by year and region

\*\* Stratified by year and region, adjusted for age and sex (except female breast cancer), deprivation and rurality

Numbers in analyses exclude cases and controls for which there were insufficient data to estimate magnetic field strength, as follows: a) leukemia, 344 (cases), 1089 (controls); brain/central nervous system cancer, 327 (cases), 934 (controls); malignant melanoma, 454 (cases), 1244 controls; female breast cancer, 1359 (cases), 1256 (controls); b) leukemia, 439 (cases), 1367 (controls); brain/central nervous system cancer, 326 (cases), 929 (controls); malignant melanoma, 454 (cases), 1243 controls; female breast cancer, 1352 (cases), 1257 (controls).

**eTable 4. Females aged 15-74 years living within 1000 m of a power line included in the Office for National Statistics Longitudinal Study: Migration between 1991-2001 a) *out of* and b) *into* areas by distance from powerlines: all females, those with registered breast cancer, and those with registered control cancers; c) Numbers (%) of females by social class based on occupation and by distance from powerlines 2001**

<b>a)</b>	<b>All females</b>		<b>Females with breast cancer</b>		<b>Females with control cancers</b>	
	Distance from power lines 1991	Movement out of area (%) Total	Movement out of area (%) Total	Movement out of area (%) Total	Movement out of area (%) Total	Movement out of area (%) Total
<b>0-100m</b>	235 (68%)	346	0	3	11 (61%)	18
<b>100 – 1000m</b>	5,684 (41%)	13,698	22 (23%)	94	142 (27%)	520

Breast cancer vs control cancers P-value (0-100m) = 0.090, P-value (100-1000m) = 0.527

<b>b)</b>	<b>All females</b>		<b>Females with breast cancer</b>		<b>Females with control cancers</b>	
	Distance from power lines 2001	Movement into area (%) Total	Movement into area (%) Total	Movement into area (%) Total	Movement into area (%) Total	Movement into area (%) Total
<b>0-100m</b>	240 (68%)	351	3 (50%)	6	8 (53%)	15
<b>100 – 1000m</b>	6,086 (43%)	14,100	29 (29%)	101	195 (34%)	573

Breast cancer vs control cancers P-value (0-100m) = 1.000, P-value (100-1000m) = 0.359

eTable 4 continued

c)	Social class						
	I&II Professional & Intermediate	IIIN Skilled Non Manual	IIIM Skilled Manual	IV Part Skilled	V Unskilled	Inadequately defined (includes Armed forces)	Total
<b>0-100m</b>	80 (23%)	126 (36%)	25 (7%)	48 (14%)	17 (5%)	55 (16%)	351
<b>100 – 1000m</b>	3,523 (25%)	4,457 (32%)	958 (7%)	2,063 (15%)	748 (5%)	2,351 (17%)	14,100

Difference across categories of social class between the two areas, P-value = 0.660

Source: ONS Longitudinal Study