

# ***XRCC3 and XPD/ERCC2 single nucleotide polymorphisms and the risk of cancer: A HuGE review***

## **Web Material**

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**Table 1 Genotype and allele frequencies.**

**XRCC3-IVS6 1571**

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			Hardy-Weinberg	
			T	C	TT	TC	CC	N	p
Jacobsen	2004	Caucasians	92.6	7.4	85.9	13.4	0.7	269	0.715

**XRCC3-IVS5-14**

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	p
			A	G	AA	AG	GG		
Jacobsen	2004	Caucasians	63.7	36.3	40.1	47.2	12.7	269	0.735
Han	2004c	Mixed	64.1	36.0	41.6	44.9	13.5	659	0.521
Han	2004a	Undefined	69.5	30.5	48.0	43.0	9.0	1265	0.612

**XRCC3-Cod.241**

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	p
			C (Thr)	T (Met)	CC	CT	TT		
David-Beabes	2001	African-Americans	76.9	23.1	58.1	37.6	4.3	234	0.372
Wang	2003	African-Americans	78.0	22.0	62.6	30.8	6.6	91	0.327
		<b>African-Americans</b>			<b>59.1</b>	<b>35.4</b>	<b>4.6</b>	<b>325</b>	
Shen	2004	Asians	95.3	4.9	90.4	9.7	0.0	166	0.500
Yeh	2005	Asians	94.8	5.4	89.7	10.1	0.3	736	0.855
		<b>Asians</b>			<b>89.8</b>	<b>10.0</b>	<b>0.2</b>	<b>902</b>	
Winsey	2000	Caucasians	70.5	29.5	52.0	37.0	11.0	211	0.109
Matullo	2001	Caucasians	63.0	37.0	49.0	28.0	23.0	85	<b>&lt;0.001</b>
David-Beabes	2001	Caucasians	61.8	38.2	38.6	46.4	15.0	453	0.713
Seedhouse	2002	Caucasians	70.9	29.2	52.6	36.6	10.9	175	0.127
Duan	2002	Caucasians	61.2	38.9	36.4	49.5	14.1	319	0.455
Shen	2002	Caucasians	63.8	36.2	39.8	48.0	12.2	354	0.461
Jacobsen	2003	Caucasians	66.8	34.2	46.3	41.0	13.7	315	0.081
Jacobsen	2003	Caucasians	61.4	38.9	37.9	46.9	15.4	422	0.761
Misra	2003	Caucasians	71.0	29.0	49.0	44.0	7.0	315	0.224
Bertram	2004	Caucasians	64.0	36.0	40.0	48.0	12.0	335	0.446
Shen	2003	Caucasians	60.0	40.0	33.0	54.0	13.0	214	0.067
Sanyal	2004	Caucasians	66.0	34.0	44.0	44.0	12.0	246	0.758
Harms	2004	Caucasians	71.5	28.5	51.0	41.0	8.0	119	0.948
Wang	2004	Caucasians	64.5	35.5	43.0	43.0	14.0	342	0.259
Benhamou	2004	Caucasians	55.1	44.9	28.3	53.6	18.1	166	0.283

Jacobsen	2004	Caucasians	63.0	37.0	42.0	42.0	16.0	269	0.104
Smith	2003	Caucasians	62.8	35.3	38.7	48.1	11.2	268	0.218
		<b>Caucasians</b>			<b>41.4</b>	<b>44.9</b>	<b>12.4</b>	<b>4608</b>	
Wang	2003	Hispanic	77.8	22.2	62.6	30.3	7.1	99	0.220
Stern	2002	Mixed	67.0	33.0	45.0	44.0	11.0	209	0.943
David-Beabes	2001	Mixed	67.0	33.1	45.3	43.4	11.4	687	0.587
Smith	2003	Mixed	60.5	39.6	37.1	46.7	16.2	302	0.685
Wang	2003	Mixed	81.3	18.7	62.6	37.4	0.0	190	<b>0.002</b>
Han	2004b	Mixed	61.5	38.6	37.0	48.9	14.1	810	0.361
Han	2004c	Mixed	65.1	34.9	42.1	46.0	11.9	665	0.751
Han	2004a	Undefined	62.5	37.5	38.0	49.0	13.0	1245	0.110
Popanda	2004	Undefined	61.0	39.0	37.0	48.0	15.0	460	0.850
Figueiredo	2004	Undefined	61.2	38.8	36.3	49.8	13.9	402	0.330

#### XRCC3-A4552C

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	0.956
			A	C	AA	AC	CC		
Han	2004	Mixed	81.0	19.1	65.5	30.9	3.6	861	

#### XRCC3-5' region pos.4541

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	0.290
			A	G	AA	AG	GG		
Winsey	2000	Caucasians	23.0	77.0	4.0	38.0	58.0	211	
Jacobsen	2004	Caucasians	80.9	18.2	66.8	28.1	4.1	268	0.334
		<b>Caucasians</b>			<b>39.0</b>	<b>32.4</b>	<b>27.6</b>	<b>479</b>	
Han	2004c	Mixed	81.2	18.9	66.1	30.1	3.8	663	0.678
Han	2004a	Undefined	79.5	20.5	67.0	25.0	8.0	1291	<b>&lt;&lt;0.001</b>

#### XPD/ERCC2-Intron 4

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	0.069
			A	G	AA	AG	GG		
Yin	2002	Caucasians	40.2	59.8	20.6	39.2	40.2	97	

#### XPD/ERCC2-Cod.751

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	0.586
			C (Gln)	A (Lys)	CC	CA	AA		
David-Beabes	2001	African-Americans	25.1	75.1	5.6	38.9	55.6	234	

Stern	2002a	African -Americans	65.0	35.0	38.0	54.0	8.0	13	0.501
		<b>African -Americans</b>			<b>6.9</b>	<b>39.7</b>	<b>53.0</b>	<b>247</b>	
Park	2002	Asians	5.5	94.5	0.0	11.0	89.0	163	0.457
Xing	2002	Asians	7.3	92.8	0.6	13.3	86.1	524	0.800
Liang	2003	Asians	8.7	91.3	0.6	16.3	83.1	1010	0.494
Chen	2002	Asians	40.4	59.7	18.3	44.1	37.6	109	0.381
Xing	2002	Asians	7.2	92.8	0.8	12.8	86.4	383	0.409
Yu	2004	Asians	6.9	93.1	1.3	11.2	87.5	152	0.114
Yeh	2005	Asians	7.2	92.9	0.6	13.1	86.3	736	0.717
		<b>Asians</b>			<b>1.1</b>	<b>14.9</b>	<b>83.6</b>	<b>3077</b>	
Sturgis	2000	Caucasians	33.8	66.3	11.5	44.5	44.0	496	0.913
Dybdahl	1999	Caucasians	40.0	60.0	20.0	40.0	40.0	20	0.456
Winsey	2000	Caucasians	40.5	59.5	15.0	51.0	34.0	211	0.398
Spitz	2001	Caucasians	33.3	66.7	10.8	45.0	44.2	360	0.805
Vogel	2001	Caucasians	36.4	63.7	10.3	52.1	37.6	117	0.173
Matullo	2001	Caucasians	45.5	54.5	17.0	57.0	26.0	85	0.169
Caggana	2001	Caucasians	41.5	58.5	16.0	51.0	33.0	148	0.540
Stern	2002a	Caucasians	37.5	62.5	15.0	45.0	40.0	197	0.575
David-Beabes	2001	Caucasians	34.7	65.3	12.8	43.7	43.5	453	0.458
Seedhouse	2002	Caucasians	37.0	63.0	15.1	43.8	41.1	73	0.605
Misra	2003	Caucasians	40.5	59.5	15.0	51.0	34.0	315	0.302
Rybicki	2004	Caucasians	35.6	64.5	12.0	47.1	40.9	437	0.560
Shen	2003	Caucasians	40.0	60.0	17.0	46.0	37.0	214	0.542
Baccarelli	2004	Caucasians	42.7	57.3	18.7	48.0	33.3	177	0.800
Sanyal	2004	Caucasians	38.0	62.0	15.0	46.0	39.0	246	0.709
Harms	2004	Caucasians	27.5	72.5	6.0	43.0	51.0	119	0.393
Shi	2004	Caucasians	29.8	70.3	7.6	44.3	48.1	79	0.595
Allan	2004	Caucasians	36.5	63.5	15.0	43.0	42.0	729	0.051
Zhou	2002	Caucasians	36.0	63.0	13.0	46.0	40.0	1240	0.595
Justenhoven	2004	Caucasians	36.5	63.5	14.0	45.0	41.0	643	0.459
		<b>Caucasians</b>			<b>13.4</b>	<b>45.8</b>	<b>40.1</b>	<b>6359</b>	
David-Beabes	2001	Mixed	31.4	68.7	10.3	42.1	47.6	687	0.566
Buch	2005	Mixed	27.5	72.5	11.9	31.2	56.9	269	<0.001
Tang	2002	Undefined	36.4	63.6	17.4	38.0	44.6	121	0.049
Allan	2004	Undefined	36.5	63.5	15.0	43.0	42.0	729	0.051
Popanda	2004	Undefined	36.5	63.5	14.0	45.0	41.0	460	0.531
Terry	2005	Undefined	36.3	63.7	13.7	45.2	41.1	1102	0.453

XPD/ERCC2-Cod.711

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)		
			C (Asp)	T (Asp)	CC	CT	TT
Study A	2010	African American	0.25	0.75	40	40	20
Study B	2012	Asian	0.30	0.70	35	35	30
Study C	2014	European	0.28	0.72	45	35	20
Study D	2016	Middle Eastern	0.32	0.68	30	45	25
Study E	2018	American Indian	0.22	0.78	50	25	25

Caggana	2001	Caucasians	67.0	32.0	46.0	42.0	11.0	140	0.658
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#### XPD/ERCC2-Cod.312

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)				N	Overall Freq (%)
			G (Asp)	A (Asn)	GG	GA	AA			
Xing	2002	Asians	93.9	6.1	88.0	11.8	0.2	524	0.492	
Liang	2003	Asians	93.5	6.5	87.2	12.8	0.1	1020	0.083	
Xing	2002	Asians	94.2	5.9	88.3	11.7	0.0	383	0.224	
Yu	2004	Asians	94.8	5.3	89.5	10.5	0.0	152	0.495	
		<b>Asians</b>			<b>87.7</b>	<b>12.0</b>	<b>0.0</b>	<b>2079</b>		
Winsey	2000	Caucasians	64.5	35.5	42.0	45.0	13.0	211	0.801	
Spitz	2001	Caucasians	72.8	27.3	52.5	40.5	7.0	360	0.684	
Butkiewicz	2001	Caucasians	56.5	43.5	31.0	51.0	18.0	96	0.713	
Vogel	2001	Caucasians	62.4	37.7	43.8	37.1	19.1	105	<b>0.032</b>	
Caggana	2001	Caucasians	64.5	35.5	41.0	47.0	12.0	137	0.758	
Misra	2003	Caucasians	63.5	36.5	40.0	47.0	13.0	315	0.805	
Rybicki	2004	Caucasians	66.2	33.9	41.2	49.9	8.9	437	<b>0.017</b>	
Baccarelli	2004	Caucasians	60.2	39.9	34.3	51.7	14.0	172	0.304	
Shi	2004	Caucasians	75.3	24.7	58.2	34.2	7.6	79	0.474	
Zhou	2002	Caucasians	67.0	33.0	44.0	46.0	10.0	1240	0.156	
Justenhoven	2004	Caucasians	66.0	34.0	45.0	42.0	13.0	610	0.113	
		<b>Caucasians</b>			<b>43.5</b>	<b>45.1</b>	<b>11.1</b>	<b>3762</b>		
Tang	2002	Undefined	78.6	21.4	66.1	25.0	8.9	112	<b>0.007</b>	
Popanda	2004	Undefined	63.5	36.5	42.0	43.0	15.0	460	0.121	

#### XPD/ERCC2-Cod.156

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)				N	Overall Freq (%)
			C (Arg)	A (Arg)	CC	CA	AA			
Sturgis	2000	Caucasians	55.4	44.7	31.1	48.6	20.4	496	0.691	
Dybdahl	1999	Caucasians	62.5	37.5	40.0	45.0	15.0	20	0.858	
Winsey	2000	Caucasians	60.0	40.0	33.0	54.0	13.0	211	0.069	
Vogel	2001	Caucasians	59.0	41.0	37.8	42.3	19.8	111	0.189	
Caggana	2001	Caucasians	61.5	38.5	40.0	43.0	17.0	139	0.278	
		<b>Caucasians</b>			<b>33.5</b>	<b>47.9</b>	<b>17.9</b>	<b>977</b>		

#### XPD/ERCC2-201

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)				N
			C (His)	T (Tyr)	CC	CT	TT		
Sturgis	2002	Caucasians	100.0	0.0	100.0	0.0	0.0	400	

**XPD/ERCC2-199**

Study	Year	Ethnicity	Allele Freq (%)		Genotype Frequency (%)			N	D
			C (Ile)	G (Met)	CC	CG	GG		
Sturgis	2002	Caucasians	99.2	0.9	98.3	1.7	0.0	400	0.864

**Table 2. Study design: XPD/ERCC2**

Study	Date	Nationality	Polymorphisms	Cancer Site	Method	Design	Ethnic group	No. case-controls	Exposure
Dybdahl	1999	Denmark	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156	Skin	PCR-RFLP	H-B casecontrol	Caucasian	40/40	NULL
Sturgis	2000	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156	Head and neck	PCR-RFLP	H-B case-control	Non-Hispanic whites	189/496	Smoking, alcohol
Winsey	2000	UK	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156 <i>XRCC1</i> Cod.194 <i>XPD/ERCC2</i> Cod.312 <i>XPF/ERCC4</i> 5' UTR pos.2063 <i>XPF/ERCC4</i> Exon 11 pos.30028 <i>ERCC1</i> Exon 4 pos.19007 <i>XRCC3</i> Cod.241 <i>XRCC3</i> 5' region pos.4541	Skin	PCR-SSCP	H-B case control	Caucasians	125/211	NULL
Butkiewicz	2001	Poland	<i>XPD/ERCC2</i> Cod.312	Lung	PCR-RFLP	P-B case-control	Whites	96/96+52 members of 4 families	Smoking NULL
Caggana	2001	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156 <i>XPD/ERCC2</i> Cod.312 <i>XPD/ERCC2</i> Cod.711	Glioma	PCR-RFLP	P-B case control	Caucasian and Others	187/169	NULL
David-Beabes	2001	USA	<i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Lung	PCR-RFLP	P-B case-control	Caucasians African Americans	331/687	NULL
Matullo	2001	Italy	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Bladder	PCR-RFLP	H-B case-control	Caucasians	124/85	Smoking
Spitz	2001	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Lung	PCR-RFLP HCRA	H-B case-control	Whites	341/360	Smoking,alcohol
Tomescu	2001	Scotland	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156 <i>ERCC1</i> Exon 4 pos.19007 <i>XPD/ERCC2</i> Cod.711 <i>CKM</i> Exon 8 <i>CKM</i> 3'	Skin	PCR-RFLP	H-B case-control	Caucasians	28/28	NULL

Vogel	2001	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156 <i>XPD/ERCC2</i> Cod.312	Skin	PCR-RFLP	H-B case-control	Caucasians	70/117	Sunburns, skin type
Chen	2002	USA China	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC1</i> Cod.194	Lung	PCR-RFLP	P-B case control	Asians	109/109	Smoking
Hou	2002	Sweden	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Lung	PCR-RFLP	P-B case control	Undefined	185/162	Smoking
Park	2002	South Korea	<i>XPD/ERCC2</i> Cod.751	Lung	PCR-RFLP	H-B case-control	Asians	250/163	Smoking
Seedhouse	2002	UK	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC1</i> Cod.194 <i>XRCC3</i> Cod.241 <i>NQO1</i> Cod. 187	Leukemia Secondary leukemia	PCR-RFLP	H-B case control	Caucasians	168/178	NULL
Stern	2002a	USA	<i>XPD/ERCC2</i> Cod.751	Bladder	PCR-RFLP	H-B case-control	Whites and blacks	228/210	Smoking
Sturgis	2002	USA	<i>XPD/ERCC2</i> 23047 <i>XPD/ERCC2</i> 23051	Head and neck	PCR-RFLP	H-B case control	Non-Hispanic whites	180/400	NULL
Tang	2002	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Breast	PCR-RFLP	H-B case control	Undefined	103/215	NULL
Xing	2002a	China	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC1</i> Cod.194 <i>XPD/ERCC2</i> Cod.312	Esophageal	PCR-RFLP	P-B case control	Asians	433/524	Smoking
Xing	2002b	China	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Lung	PCR-RFLP	P-B case control	Asians	351/383	Smoking
Yin	2002	Denmark	<i>XRCC1</i> Cod.399 <i>ERCC1</i> Exon 4 pos.19007 <i>CKM</i> Exon 8 <i>LIG1</i> exon 6 <i>XPD/ERCC2</i> Intron 4 <i>RAI</i> Exon 6 <i>RAI</i> Intron 1 <i>FOSB</i> Exon 4 <i>SLC1A5</i> Exon 8 <i>GLTSCR1</i> Exon 1	Skin	TaqMan	H-B case control	Caucasians	97/58	NULL
Zhou	2002	USA	<i>XPD/ERCC2</i> Cod.751	Lung	PCR-RFLP	P-B case control	Caucasians	1092/1240	Smoking

			XPD/ERCC2 Cod.312						
Gao	2003	USA	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Lung	TaqMan	Case-Only	Caucasians	204	Smoking
Liang	2003	China	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Lung	PCR-RFLP	P-B case control	Asians	1006/1020	Smoking
Misra	2003	Finland	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312 <i>XRCC3</i> Cod.241 <i>XRCC1</i> Cod.280 APEX Cod. 148	Lung	TaqMan	P-B case control	Caucasians	315/315	Smoking
Shen	2003	USA Italy	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Bladder	PCR-RFLP	H-B case control	Caucasians	201/214	Smoking
Allan	2004	UK	<i>XPD/ERCC2</i> Cod.751	Leukemia	PCR-RFLP	P-B case control	Undefined	852/729	NULL
Baccarelli	2004	USA Italy	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Skin	TaqMan	P-B case control	Caucasians	176/177	Sunlight
Brewster	2004	USA	<i>XPD/ERCC2</i> Cod.751	Skin	TaqMan	Case-cohort	Undefined	80/401	Smoking
Harms	2004	USA	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Lung	PCR-RFLP	H-B case control	Caucasians	110/119	Smoking
Justenhoven	2004	Germany	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Breast	Sequencing	P-B case control	Caucasians	688/724	Smoking
Popanda	2004	Germany	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312 <i>XRCC3</i> Cod.241 XPA 5' NCR APEX Cod. 148	Lung	PCR-RFLP	H-B case control	Caucasians	463/460	Smoking
Rybicki	2004	USA	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Prostate	PCR-RFLP	P-B case control	Caucasians	637/480	NULL
Sanyal	2004	Sweden	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Bladder	TaqMan PCR-RFLP	H-B case control	Caucasians	327/246	NULL

			<i>CCND1</i> Cod.870 <i>XPG</i> Cod. 1104 <i>NQO1</i> Exon 6 <i>NBS1</i> Cod. 185 <i>XPC</i> exon 4 <i>MTHFR</i> exon 4 <i>MTHFR</i> exon 7 <i>NQO1</i> exon 4 <i>H-ras</i> exon 1 <i>GSTT1</i> Deletion allele						
Shi	2004	USA	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Breast	PCR-RFLP	H-B case control	Non-Hispanic whites	69/79	Smoking
Yu	2004	China	<i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312	Esophageal	PCR-RFLP	H-B case control	Asians	135/152	Smoking Alcohol
Terry	2005	USA	<i>XPD/ERCC2</i> Cod.751	Breast	Other	P-B case control	Undefined	1053/1102	Smoking
Yeh	2005	Taiwan	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Colorectal	PCR-RFLP	H-B case control	Asians	727/736	NULL

**Table 3. Study design: XRCC3**

Study	Date	Nationality	Polymorphisms	Cancer Site	Method	Design	Ethnic group	Num. case-controls	Exposures
<a href="#">Winsey</a>	2000	UK	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.156 <i>XRCC1</i> Cod.194 <i>XPD/ERCC2</i> Cod.312 <i>XPF/ERCC4</i> 5' UTR pos.2063 <i>XPF/ERCC4</i> Exon 11 pos.30028 <i>ERCC1</i> Exon 4 pos.19007 <i>XRCC3</i> Cod.241 <i>XRCC3</i> 5' region pos.4541	Skin	PCR-SSCP	H-B case control	Caucasians	125/211	NULL
<a href="#">David-Beabes</a>	2001	USA	<i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Lung	PCR-RFLP	P-B case-control	Caucasians African Americans	331/687	Smoking
<a href="#">Matullo</a>	2001	Italy	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Bladder	PCR-RFLP	H-B case-control	Caucasians	124/85	Smoking
<a href="#">Duan</a>	2002	USA	<i>XRCC3</i> Cod.241	Skin	PCR-RFLP	H-B case control	Non-Hispanic whites	305/319	NULL
<a href="#">Seedhouse</a>	2002	UK	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC1</i> Cod.194 <i>XRCC3</i> Cod.241 <i>NQO1</i> Cod. 187	Leukemia Secondary leukemia	PCR-RFLP	H-B case control	Caucasians	168/178	NULL
<a href="#">Shen</a>	2002	USA	<i>XRCC3</i> Cod.241	Head and neck	PCR-SSCP	H-B case control	Non-Hispanic whites	367/354	Smoking Alcohol
<a href="#">Stern</a>	2002b	USA	<i>XRCC3</i> Cod.241	Bladder	PCR-RFLP	H-B case-control	White or black	233/209	Smoking
<a href="#">Jacobsen</a>	2003	Denmark	<i>XRCC3</i> Cod.241	Breast Skin	PCR-RFLP Sequencing	H-B case control	Caucasians	319/321 426/424	NULL
<a href="#">Medina</a>	2003	USA	<i>XRCC3</i> Cod.241 <i>BRCA2</i> Cod. 372 <i>NBS1</i> Cod. 185	Lung	PCR-RFLP	Case-Only	Caucasians African-Americans	109	NULL
<a href="#">Misra</a>	2003	Finland	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312 <i>XRCC3</i> Cod.241	Lung	TaqMan	P-B case control	Caucasians	315/315	Smoking

			<i>XRCC1</i> Cod.280 <i>APEX</i> Cod. 148					
<a href="#">Shen</a>	2003	USA Italy	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Bladder	PCR-RFLP	H-B case control	Caucasians	201/214 Smoking
<a href="#">Smith</a>	2003a	USA	<i>XRCC1</i> Cod.399 <i>XRCC1</i> Cod.194 <i>XRCC3</i> Cod.241	Breast	PCR-RFLP	P-B case control	Undefined	162/302 NULL
<a href="#">Smith</a>	2003b	USA	<i>XRCC1</i> Cod.399 <i>XRCC1</i> Cod.194 <i>XRCC3</i> Cod.241 <i>XPF/ERCC4</i> Cod. 415	Breast	PCR-RFLP Sequencing	H-B case control	Undefined	253/268 NULL
<a href="#">Wang</a>	2003	USA	<i>XRCC3</i> Cod.241	Lung	PCR-RFLP	P-B case control	African-Americans Mexican-Americans	112/190 Smoking
<a href="#">Benhamou</a>	2004	France	<i>XRCC3</i> Cod.241 <i>XRCC2</i> Cod 188	Oral Pharynx Larynx	PCR-RFLP	H-B case control	Caucasians	250/172 Smoking
<a href="#">Bertram</a>	2004	UK	<i>XRCC3</i> Cod.241	Skin	PCR-RFLP	P-B case control	Caucasians	140/335 NULL
<a href="#">Figueiredo</a>	2004	Canada	<i>XRCC1</i> Cod.399 <i>XRCC3</i> Cod.241	Breast	Other	P-B case control	Undefined	402/402 Smoking Alcohol
<a href="#">Han</a>	2004a	USA	<i>XRCC3</i> Cod.241 <i>XRCC3</i> 5' region pos.4541 <i>XRCC2</i> Cod 188 <i>XRCC3</i> IVS5-14 <i>LIG4</i> C299T <i>LIG4</i> Cod. 501	Breast	TaqMan	P-B case control	Undefined	1004/1385 NULL
<a href="#">Han</a>	2004b	USA	<i>XRCC3</i> Cod.241 <i>XRCC2</i> Cod 188 <i>LIG4</i> C4062T <i>LIG4</i> C4044T <i>LIG4</i> Cod. 501 <i>XRCC2</i> C29244T <i>XRCC2</i> A31342G <i>XRCC2</i> G30833A <i>XRCC2</i> G30935A	Skin	TaqMan	P-B case control	Caucasians Asians Hispanics	805/873 NULL

			<i>XRCC3</i> A4552C						
<a href="#">Han</a>	2004c	USA	<i>XRCC3</i> Cod.241 <i>XRCC3</i> 5' region pos.4541 <i>XRCC2</i> Cod 188 <i>XRCC3</i> IVS5-14	Endometrial	TaqMan	H-B case control	Undefined	220/666	NULL
<a href="#">Harms</a>	2004	USA	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Lung	PCR-RFLP	H-B case control	Caucasians	110/119	Smoking
<a href="#">Jacobsen</a>	2004	Denmark	<i>XRCC3</i> Cod.241 <i>XRCC3</i> 5' region pos.4541 <i>XRCC3</i> IVS5-14 <i>XRCC3</i> IVS6 1571	Lung	TaqMan	Case-cohort	Caucasians	267/269	Smoking
<a href="#">Popanda</a>	2004	Germany	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XPD/ERCC2</i> Cod.312 <i>XRCC3</i> Cod.241 <i>XPA</i> 5' NCR <i>APEX</i> Cod. 148	Lung	PCR-RFLP	H-B case control	Caucasians	463/460	Smoking
<a href="#">Sanyal</a>	2004	Sweden	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241 <i>CCND1</i> Cod.870 <i>XPG</i> Cod. 1104 <i>NQO1</i> Exon 6 <i>NBS1</i> Cod. 185 <i>XPC</i> exon 4 <i>MTHFR</i> exon 4 <i>MTHFR</i> exon 7 <i>NQO1</i> exon 4 <i>H-ras</i> exon 1 <i>GSTM1</i> Deletion allele	Bladder	TaqMan PCR-RFLP	H-B case control	Caucasians	327/246	NULL
<a href="#">Shen</a>	2004	China	<i>XRCC3</i> Cod.241	Gastric	PCR-RFLP	P-B case control	Asians	188/166	Smoking Alcohol
<a href="#">Wang</a>	2004	USA	<i>XRCC1</i> Cod.399 <i>XRCC3</i> Cod.241	Glioma	PCR-RFLP	H-B case control	Caucasians	309/342	NULL

			<i>TP53</i> Cod 72 <i>RAD51</i> 5` UTR <i>XRCC7</i> G6721T						
<a href="#">Yeh</a>	2005	Taiwan	<i>XRCC1</i> Cod.399 <i>XPD/ERCC2</i> Cod.751 <i>XRCC3</i> Cod.241	Colorectal	PCR-RFLP	H-B case control	Asians	727/736	NULL

**Table 4. Results: XPD/ERCC2**

**Cod.156 Skin**

		Caucasians	CA vs CC				AA vs CC				CA + AA vs CC		
			OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI
Adjusted OR	Dybdahl 1999	Caucasians	3.26	0.66	16.07	1.51	5.33	0.78	36.37	1.04			
Fixed effects meta-analysis	Vogel 2001	Caucasians	2.01	0.98	4.13	7.43	1.67	0.69	4.04	4.92			
	<b>Summary</b>		<b>2.18</b>	<b>1.13</b>	<b>4.20</b>		<b>2.05</b>	<b>0.92</b>	<b>4.56</b>				
	<i>Heterogeneity test X<sup>2</sup>=</i>		0.29				1.16						
	<i>p-value=</i>		0.59				0.28						
Crude OR	Dybdahl 1999	Caucasians	3.26	0.66	16.03	1.51	5.33	0.78	36.33	1.04	3.78	0.83	17.25
Fixed effects meta-analysis	Vogel 2001	Caucasians	2.01	0.98	4.14	7.39	1.67	0.69	4.04	4.92	1.90	0.96	3.76
	Winsey 2000	Caucasians	0.92	0.57	1.49	16.41	0.88	0.42	1.84	7.11	0.91	0.57	1.46
	<b>Summary</b>		<b>1.26</b>	<b>0.86</b>	<b>1.85</b>		<b>1.30</b>	<b>0.77</b>	<b>2.21</b>		<b>1.26</b>	<b>0.87</b>	<b>1.81</b>
	<i>Heterogeneity test X<sup>2</sup>=</i>		4.59				3.45				5.24		
	<i>p-value=</i>		0.10				0.18				0.07		

**Cod.312 Breast**

		Caucasians	GA vs GG				AA vs GG				GA + AA vs GG		
			OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI
Adjusted OR	Justenhoven 2004	Caucasians					0.49	0.33	0.72	24.47			
Random effects meta-analysis	Shi 2004	Caucasians					2.06	0.63	6.71	2.75	2.01	1.03	3.93
	Tang 2002	Undefined									1.58	0.85	2.94
	<b>Summary</b>						<b>0.89</b>	<b>0.22</b>	<b>3.63</b>		<b>1.77</b>	<b>1.12</b>	<b>2.79</b>
	<i>Heterogeneity test X<sup>2</sup>=</i>						5.17				0.27		
	<i>p-value=</i>						0.02				0.61		
Crude OR	Justenhoven 2004	Caucasians	0.54	0.42	0.70	62.00	0.45	0.30	0.67	24.14	0.52	0.41	0.66
Random effects meta-analysis	Shi 2004	Caucasians	1.88	0.94	3.75	8.03	2.11	0.67	6.72	2.87	1.92	1.00	3.70
	Tang 2002	Undefined	1.58	0.85	2.93	9.93	1.00	0.36	2.79	3.63	1.42	0.80	2.52
	<b>Summary</b>		<b>1.12</b>	<b>0.46</b>	<b>2.74</b>		<b>0.87</b>	<b>0.34</b>	<b>2.23</b>		<b>1.08</b>	<b>0.44</b>	<b>2.65</b>
	<i>Heterogeneity test X<sup>2</sup>=</i>		18.29				7.39				21.01		
	<i>p-value=</i>		<0.01				0.02				<0.01		

**Cod.312 Lung**

			GA vs GG				AA vs GG				GA + AA vs GG		
			OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI

Adjusted OR	Liang 2003 Asians	1.03	0.80	1.32	61.82	10.33	1.29	82.61	0.89				
Fixed effects meta-analysis	Misra 2003 Caucasians	0.72	0.50	1.04	28.65	0.93	0.55	1.58	13.80				
	Popanda 2004 Undefined	1.14	0.83	1.56	39.39	1.05	0.68	1.62	20.69				
	Spitz 2001 Caucasians	0.93	0.63	1.38	24.54	1.51	0.76	3.00	8.15				
	Zhou 2002 Caucasians	0.98	0.80	1.20	93.47	1.41	1.10	1.80	63.36				
	Butkiewicz 2001 Caucasians					0.72	0.32	1.64	5.68				
	<b>Summary</b>	<b>0.98</b>	<b>0.86</b>	<b>1.11</b>		<b>1.25</b>	<b>1.04</b>	<b>1.51</b>					
	<i>Heterogeneity test X<sup>2</sup>=</i>	3.84				8.74							
	<i>p-value=</i>	0.43				0.12							
Crude OR	Butkiewicz 2001 Caucasians	0.50	0.26	0.94	9.47	0.74	0.33	1.66	5.85	0.56	0.31	1.01	11.04
Fixed effects meta-analysis	Liang 2003 Asians	0.98	0.76	1.28	55.66	11.24	1.45	87.25	0.91	1.06	0.82	1.37	57.93
	Misra 2003 Caucasians	0.74	0.53	1.04	33.87	0.93	0.57	1.52	16.14	0.78	0.57	1.07	38.45
	Popanda 2004 Undefined	1.15	0.87	1.52	48.90	1.07	0.72	1.58	25.19	1.13	0.87	1.46	55.56
	Spitz 2001 Caucasians	0.92	0.67	1.25	38.92	1.57	0.91	2.72	12.83	1.01	0.75	1.36	43.68
	Zhou 2002 Caucasians	1.00	0.84	1.19	127.42	1.47	1.12	1.92	53.73	1.08	0.92	1.28	142.23
	<b>Summary</b>	<b>0.96</b>	<b>0.86</b>	<b>1.07</b>		<b>1.30</b>	<b>1.08</b>	<b>1.55</b>		<b>1.02</b>	<b>0.92</b>	<b>1.13</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>	8.26				10.13				7.87			
	<i>p-value=</i>	0.14				0.07				0.16			

#### Cod.312 Skin

		GA vs GG				AA vs GG				GA + AA vs GG			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	Baccarelli 2004 Caucasians									1.50	0.90	2.50	14.72
Fixed effects meta-analysis	Vogel 2001 Caucasians									1.05	0.57	1.94	10.24
	<b>Summary</b>									<b>1.30</b>	<b>0.88</b>	<b>1.92</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>									0.77			
	<i>p-value=</i>									0.38			
Crude OR	Baccarelli 2004 Caucasians	1.20	0.75	1.92	17.23	0.85	0.42	1.74	7.50	1.12	0.71	1.77	18.53
Fixed effects meta-analysis	Vogel 2001 Caucasians	1.02	0.51	2.02	8.21	1.11	0.49	2.54	5.63	1.05	0.57	1.94	10.12
	Winsey 2000 Caucasians	1.03	0.64	1.67	16.48	1.48	0.76	2.87	8.76	1.13	0.72	1.78	18.87
	<b>Summary</b>	<b>1.09</b>	<b>0.81</b>	<b>1.48</b>		<b>1.13</b>	<b>0.75</b>	<b>1.72</b>		<b>1.11</b>	<b>0.84</b>	<b>1.48</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>	0.24				1.24				0.04			
	<i>p-value=</i>	0.89				0.54				0.98			

#### Cod.751 Bladder

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	Sanyal 2004 Caucasians	1.07	0.73	1.57	26.20	1.31	0.77	2.22	13.71				

Fixed effects meta-analysis	Shen 2003 Caucasians	0.89	0.58	1.36	21.16	1.00	0.57	1.75	12.21	0.92	0.62	1.37	24.45
	Stern 2002b Caucasians	1.10	0.73	1.66	22.49	0.80	0.41	1.55	8.80			0.71	0.32
	Matullo 2001 Caucasians											1.58	6.03
	<b>Summary</b>	<b>1.02</b>	<b>0.81</b>	<b>1.29</b>		<b>1.05</b>	<b>0.75</b>	<b>1.47</b>				<b>0.87</b>	<b>0.61</b>
	<i>Heterogeneity test X=</i>	<i>0.58</i>				<i>1.35</i>						<i>0.32</i>	
	<i>p-value=</i>	<i>0.75</i>				<i>0.51</i>						<i>0.57</i>	
Crude OR	Matullo 2001 Caucasians	0.76	0.40	1.43	9.40	0.75	0.31	1.77	5.14	0.75	0.41	1.39	10.17
Fixed effects meta-analysis	Sanyal 2004 Caucasians	1.08	0.75	1.56	28.27	1.29	0.78	2.12	15.47	1.13	0.80	1.60	32.06
	Shen 2003 Caucasians	0.89	0.58	1.36	21.14	1.01	0.58	1.77	12.34	0.92	0.62	1.37	24.31
	Stern 2002b Caucasians	1.05	0.69	1.59	21.79	0.85	0.46	1.55	10.53	1.00	0.67	1.48	24.45
	<b>Summary</b>	<b>0.98</b>	<b>0.78</b>	<b>1.21</b>		<b>1.02</b>	<b>0.76</b>	<b>1.37</b>				<b>0.99</b>	<b>0.80</b>
	<i>Heterogeneity test X=</i>	<i>1.19</i>				<i>1.70</i>						<i>1.44</i>	
	<i>p-value=</i>	<i>0.76</i>				<i>0.64</i>						<i>0.70</i>	

#### Cod.751 Breast

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	Justenhoven 2004 Caucasians	1.09	0.85	1.39	63.53	1.32	0.94	1.86	32.99				
Fixed effects meta-analysis	Shi 2004 Caucasians	1.41	0.71	2.82	8.00	1.49	0.46	4.84	2.76	1.19	0.62	2.30	8.82
	Tang 2002 Undefined	1.03	0.58	1.84	11.32	1.02	0.45	2.30	5.80				
	Terry 2005 Undefined	1.22	1.01	1.47	113.17	1.18	0.91	1.53	56.92	1.21	1.01	1.44	122.14
	<b>Summary</b>	<b>1.17</b>	<b>1.02</b>	<b>1.35</b>		<b>1.22</b>	<b>1.00</b>	<b>1.49</b>				<b>1.21</b>	<b>1.02</b>
	<i>Heterogeneity test X=</i>	<i>0.98</i>				<i>0.56</i>						<i>&lt;0.01</i>	
	<i>p-value=</i>	<i>0.81</i>				<i>0.90</i>						<i>0.96</i>	
Crude OR	Justenhoven 2004 Caucasians	1.08	0.85	1.38	64.43	1.32	0.94	1.84	34.03	1.14	0.90	1.43	73.22
Fixed effects meta-analysis	Shi 2004 Caucasians	1.12	0.57	2.22	8.30	1.69	0.53	5.40	2.85	1.20	0.63	2.31	9.12
	Tang 2002 Undefined	1.10	0.62	1.95	11.59	0.91	0.43	1.96	6.63	1.04	0.61	1.76	13.72
	Terry 2005 Undefined	1.20	1.00	1.44	114.39	1.18	0.91	1.54	55.73	1.20	1.01	1.42	127.76
	<b>Summary</b>	<b>1.15</b>	<b>1.00</b>	<b>1.32</b>		<b>1.22</b>	<b>1.00</b>	<b>1.48</b>				<b>1.17</b>	<b>1.02</b>
	<i>Heterogeneity test X=</i>	<i>0.50</i>				<i>1.10</i>						<i>0.33</i>	
	<i>p-value=</i>	<i>0.92</i>				<i>0.78</i>						<i>0.95</i>	

#### Cod.751 Esophageal Squamous cell carcinoma

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights

Crude OR	Xing 2002a Asians	1.11	0.77	1.60	28.49	1.23	0.25	6.12	1.49	1.11	0.77	1.59	29.59
Fixed effects meta-analysis	Yu 2004 Asians	1.09	0.52	2.28	7.03	7.39	1.62	33.73	1.67	1.75	0.92	3.32	9.39
	<b>Summary</b>	<b>1.10</b>	<b>0.79</b>	<b>1.53</b>		<b>3.62</b>	<b>1.30</b>	<b>10.06</b>		<b>1.24</b>	<b>0.91</b>	<b>1.70</b>	
	<i>Heterogeneity test X=</i>	<0.01				2.59				1.47			
	<i>p-value=</i>	0.97				0.11				0.23			

### Cod.751 Leukemia

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	Allan 2004 Caucasians	1.20	0.91	1.58	51.66	1.22	0.84	1.78	27.25				
Fixed effects meta-analysis	Seedhouse 2002 Caucasians	0.74	0.31	1.77	5.06	0.61	0.18	2.05	2.61				
	<b>Summary</b>	<b>1.15</b>	<b>0.89</b>	<b>1.49</b>		<b>1.15</b>	<b>0.80</b>	<b>1.64</b>					
	<i>Heterogeneity test X=</i>	1.08				1.14							
	<i>p-value=</i>	0.30				0.28							
Crude OR	Allan 2004 Caucasians	1.18	0.91	1.53	55.88	1.18	0.82	1.68	29.75	1.18	0.92	1.51	63.56
Fixed effects meta-analysis	Seedhouse 2002 Caucasians	1.20	0.63	2.28	9.16	1.09	0.44	2.69	4.72	1.17	0.64	2.15	10.36
	<b>Summary</b>	<b>1.18</b>	<b>0.93</b>	<b>1.51</b>		<b>1.16</b>	<b>0.83</b>	<b>1.62</b>		<b>1.18</b>	<b>0.94</b>	<b>1.48</b>	
	<i>Heterogeneity test X=</i>	<0.01				0.02				<0.01			
	<i>p-value=</i>	0.97				0.88				0.98			

### Cod.751 Lung

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	David-Beabes 2001 African-Americans	1.08	0.66	1.76	15.97	1.03	0.40	2.65	4.30	1.07	0.67	1.71	17.50
Fixed effects meta-analysis	David-Beabes 2001 Caucasians	0.97	0.62	1.52	19.11	1.34	0.74	2.42	10.95	1.06	0.70	1.61	22.15
	Harms 2004 Caucasians	1.39	0.79	2.44	12.08	0.95	0.26	3.45	2.31	1.33	0.77	2.30	12.73
	Liang 2003 Asians	0.95	0.74	1.22	61.48	2.71	1.01	7.26	3.96				
	Misra 2003 Caucasians	0.82	0.56	1.20	27.05	1.02	0.61	1.70	14.63	0.87	0.61	1.24	31.24
	Popanda 2004 Undefined	1.16	0.85	1.59	39.18	1.39	0.90	2.14	20.48				
	Spitz 2001 Caucasians	1.07	0.78	1.47	38.26	1.36	0.84	2.20	16.58				
	Zhou 2002 Caucasians	1.01	0.87	1.17	185.67	1.17	0.91	1.51	58.89				
	Xing 2002b Asians									1.42	0.94	2.15	22.45
	<b>Summary</b>	<b>1.02</b>	<b>0.92</b>	<b>1.12</b>		<b>1.24</b>	<b>1.05</b>	<b>1.47</b>		<b>1.09</b>	<b>0.91</b>	<b>1.32</b>	
	<i>Heterogeneity test X=</i>	3.60				3.96				3.68			
	<i>p-value=</i>	0.82				0.78				0.45			

Crude OR	David-Beabes 2001 African-Americans	1.14	0.74	1.74	21.18	1.39	0.59	3.26	5.31	1.17	0.78	1.76	23.00
Fixed effects meta-analysis	David-Beabes 2001 Caucasians	1.14	0.78	1.68	26.29	1.72	1.04	2.86	15.00	1.27	0.89	1.82	30.38
	Harms 2004 Caucasians	1.32	0.77	2.24	13.48	1.05	0.33	3.31	2.89	1.28	0.76	2.16	14.28
	Liang 2003 Asians	0.93	0.73	1.19	66.60	2.34	0.89	6.11	4.16	0.98	0.78	1.24	70.16
	Misra 2003 Caucasians	0.87	0.62	1.23	32.09	1.09	0.68	1.74	17.24	0.92	0.66	1.28	35.77
	Popanda 2004 Undefined	1.14	0.86	1.51	48.39	1.36	0.92	2.01	25.37	1.19	0.91	1.55	54.78
	Spitz 2001 Caucasians	1.07	0.78	1.46	38.33	1.36	0.84	2.20	16.58	1.12	0.83	1.51	42.81
	Xing 2002b Asians	1.33	0.88	2.01	22.51	1.91	0.45	8.06	1.85	1.37	0.91	2.04	23.90
	Zhou 2002 Caucasians	1.03	0.86	1.22	123.31	1.19	0.92	1.53	59.98	1.06	0.90	1.25	138.25
	<b>Summary</b>	<b>1.05</b>	<b>0.95</b>	<b>1.16</b>		<b>1.31</b>	<b>1.11</b>	<b>1.54</b>		<b>1.10</b>	<b>1.00</b>	<b>1.21</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>				4.72				4.20			4.78	
	<i>p-value=</i>				0.86				0.84			0.85	

### Cod.751 Skin

		CA vs AA				CC vs AA				CA + CC vs AA			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR	Baccarelli 2004 Caucasians									1.30	0.67	2.54	8.59
Random effects meta-analysis	Dybdahl 1999 Caucasians					0.23	0.04	1.26	1.33				
	Vogel 2001 Caucasians					1.83	0.71	4.70	4.31	1.18	0.64	2.18	10.15
	<b>Summary</b>					<b>0.74</b>	<b>0.10</b>	<b>5.51</b>		<b>1.23</b>	<b>0.78</b>	<b>1.94</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>					4.35				0.04			
	<i>p-value=</i>					0.04				0.83			
Crude OR	Baccarelli 2004 Caucasians	1.12	0.71	1.79	17.67	0.74	0.39	1.40	9.42	1.02	0.65	1.58	19.55
Fixed effects meta-analysis	Dybdahl 1999 Caucasians	0.90	0.24	3.41	2.17	0.20	0.02	2.16	0.68	0.67	0.19	2.33	2.45
	Vogel 2001 Caucasians	1.05	0.55	2.01	9.14	1.83	0.71	4.70	4.33	1.18	0.64	2.19	10.06
	Winsey 2000 Caucasians	0.75	0.46	1.22	16.00	1.13	0.59	2.14	9.29	0.84	0.53	1.32	18.29
	<b>Summary</b>	<b>0.95</b>	<b>0.71</b>	<b>1.27</b>		<b>0.98</b>	<b>0.66</b>	<b>1.45</b>		<b>0.96</b>	<b>0.73</b>	<b>1.26</b>	
	<i>Heterogeneity test X<sup>2</sup>=</i>				1.50				4.33			1.17	
	<i>p-value=</i>				0.68				0.23			0.76	

**Table 5. Results: XRCC3**

**Cod.241 Bladder**

		CT vs CC				TT vs CC				CT + TT vs CC			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR fixed effects meta-analysis	Sanyal 2004 Caucasians	0.97	0.66	1.42	26.67	1.31	0.75	2.27	12.64				24.32
	Shen 2003 Caucasians	0.60	0.40	0.90	22.74	0.74	0.39	1.39	9.62				
	Stern 2002b Mixed	1.20	0.78	1.85	20.54	1.50	0.82	2.76	10.39				
	Matullo 2001 Caucasians												
	<b>Summary</b>	<b>0.88</b>	<b>0.70</b>	<b>1.12</b>		<b>1.16</b>	<b>0.82</b>	<b>1.63</b>					
	<i>Heterogeneity test X=</i>	5.56				2.82							
Crude OR Random effects meta-analysis	<i>p-value=</i>	0.06				0.24							<0.01
	Matullo 2001 Caucasians	3.50	1.81	6.75	8.90	1.77	0.85	3.71	7.04				
	Sanyal 2004 Caucasians	0.93	0.64	1.33	29.37	1.42	0.85	2.38	14.51				
	Shen 2003 Caucasians	0.60	0.39	0.91	21.88	0.69	0.37	1.30	9.72				
	Stern 2002b Mixed	1.24	0.83	1.84	24.05	1.48	0.81	2.72	10.48				
	<b>Summary</b>	<b>1.19</b>	<b>0.66</b>	<b>2.12</b>		<b>1.26</b>	<b>0.93</b>	<b>1.70</b>					
Crude OR Fixed effects meta-analysis	<i>Heterogeneity test X=</i>	20.91				4.81							18.02
	<i>p-value=</i>	<0.01				0.19							

**Cod.241 Breast**

		CT vs CC				TT vs CC				CT + TT vs CC			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR fixed effects meta-analysis	Figueiredo 2004 Undefined	0.96	0.70	1.31	39.96	1.44	0.94	2.20	21.48				45.97
	Han 2004a Undefined	0.87	0.72	1.05	107.95	0.98	0.75	1.28	53.78				
	Jacobsen 2003 Caucasians	1.01	0.75	1.36	44.48	0.89	0.59	1.35	22.43				
	<b>Summary</b>	<b>0.92</b>	<b>0.80</b>	<b>1.06</b>		<b>1.04</b>	<b>0.86</b>	<b>1.27</b>					
	<i>Heterogeneity test X=</i>	0.80				3.01							
	<i>p-value=</i>	0.67				0.22							
Crude OR Fixed effects meta-analysis	Figueiredo 2004 Undefined	0.98	0.72	1.33	40.95	1.44	0.95	2.19	22.28				128.93
	Han 2004a Undefined	0.85	0.71	1.02	115.55	1.00	0.76	1.30	54.44				
	Jacobsen 2003 Caucasians	1.01	0.75	1.35	44.72	0.89	0.59	1.35	22.36				
	Smith 2003b Caucasians	0.88	0.60	1.29	26.80	1.84	1.08	3.13	13.70				
	Smith 2003a Mixed	0.95	0.62	1.44	21.90	0.96	0.54	1.69	11.92				
	<b>Summary</b>	<b>0.91</b>	<b>0.80</b>	<b>1.03</b>		<b>1.11</b>	<b>0.94</b>	<b>1.33</b>					
	<i>Heterogeneity test X=</i>	1.24				7.04							
	<i>p-value=</i>	0.87				0.13							

**Cod.241 Lung**

		CT vs CC				TT vs CC				CT + TT vs CC			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Adjusted OR fixed effects meta-analysis	David-Beabes 2001 African-Americans	0.90	0.55	1.48	15.68	1.67	0.57	4.88	3.34	0.98	0.61	1.57	17.43
	David-Beabes 2001 Caucasians	0.93	0.60	1.44	20.37	0.94	0.50	1.75	9.92	0.93	0.62	1.40	22.76
	Harms 2004 Caucasians	0.66	0.36	1.19	10.90	1.25	0.47	3.32	4.02	0.75	0.43	1.30	12.55
	Jacobsen 2004 Caucasians	1.54	1.05	2.26	26.15	1.46	0.87	2.46	14.11				
	Misra 2003 Caucasians	0.96	0.69	1.34	34.88	1.12	0.59	2.12	9.39	1.14	0.62	2.11	10.17
	Popanda 2004 Undefined	0.95	0.69	1.31	37.39	1.29	0.85	1.97	21.49				
	<b>Summary</b>	<b>1.00</b>	<b>0.85</b>	<b>1.18</b>		<b>1.25</b>	<b>0.97</b>	<b>1.60</b>		<b>0.93</b>	<b>0.73</b>	<b>1.20</b>	
	<i>Heterogeneity test X=</i>	7.19				1.56				1.05			
Crude OR Fixed effects meta-analysis	<i>p-value=</i>		0.21				0.91			0.79			
	David-Beabes 2001 African-Americans	0.93	0.60	1.43	20.68	1.36	0.53	3.48	4.36	0.97	0.64	1.47	22.45
	David-Beabes 2001 Caucasians	0.86	0.59	1.24	27.43	0.81	0.47	1.39	13.29	0.84	0.59	1.20	30.99
	Harms 2004 Caucasians	0.76	0.43	1.32	12.47	1.20	0.48	2.98	4.63	0.83	0.49	1.40	14.26
	Jacobsen 2004 Caucasians	1.29	0.89	1.88	27.51	1.05	0.63	1.76	14.5	1.51	1.06	2.16	30.10
	Misra 2003 Caucasians	0.87	0.63	1.20	35.93	1.22	0.67	2.22	10.65	0.91	0.67	1.25	39.36
	Popanda 2004 Undefined	0.87	0.65	1.16	47.36	1.23	0.84	1.80	26.72	0.96	0.73	1.25	54.06
	<b>Summary</b>	<b>0.92</b>	<b>0.79</b>	<b>1.07</b>		<b>1.11</b>	<b>0.88</b>	<b>1.39</b>		<b>0.99</b>	<b>0.86</b>	<b>1.14</b>	
	<i>Heterogeneity test X=</i>	4.12				1.92				6.94			
	<i>p-value=</i>		0.53				0.86			0.23			

**Cod.241 Skin**

		CT vs CC				TT vs CC				CT + TT vs CC			
		OR	0.95	CI	weights	OR	0.95	CI	weights	OR	0.95	CI	weights
Crude OR Random effects meta-analysis	Bertram 2004 Caucasians	1.12	0.72	1.72	20.58	1.47	0.80	2.72	10.21	1.19	0.79	1.79	22.90
	Duan 2002 Caucasians	0.91	0.65	1.28	33.21	0.82	0.50	1.36	15.25	0.89	0.65	1.23	36.59
	Winsey 2000 Caucasians	2.35	1.44	3.84	15.89	2.58	1.28	5.16	7.95	2.40	1.51	3.82	17.77
	<b>Summary</b>	<b>1.31</b>	<b>0.77</b>	<b>2.23</b>		<b>1.41</b>	<b>0.74</b>	<b>2.71</b>		<b>1.34</b>	<b>0.77</b>	<b>2.33</b>	
	<i>Heterogeneity test X=</i>	9.77				7.06				11.73			
	<i>p-value=</i>		0.01				0.03			<0.01			