

The Institute of Cancer Research 15 Cotsword Road, Sutton Surrey SM2 5NG

Tel: 020 8722 4469

Dear study member,

Thank you for your continued participation in the Breakthrough Generations Study, investigating the causes of breast cancer. Since we last wrote to you, the study has progressed extremely well: more than 113,000 women are now taking part and the first scientific results have been published.

Surprising as it may seem, it is now 6 years since you joined the study. As you will remember, the purpose of the study is to find out how lifestyles and events throughout life can affect a woman's risk of breast cancer. The causes of breast cancer act over many years, and so to find the causes it is crucial that, with your help, we track the continuing lifestyles and exposures of women in the study. We are therefore sending you this questionnaire, as we said we would when you joined the study, to ask about changes in your life since you filled in a similar questionnaire 6 years ago. We would be very grateful if you would complete it and send it back to us. We have made it shorter than the questionnaire you filled in when you joined the study, in order to make it practical, as far as possible, for all study members to complete it. We know that some of you would like it to be longer, including more topics or more detail, and others would wish it be shorter, and take less time – we hope that both will find the current length and contents manageable.

Thank you again for your contribution to the study: we are, with your help, collecting unique information to unravel the causes of this disease, and hence to be able to prevent it.

Yours sincerely.

Anthony Swerdlow, BM BCh PhD DM DSc FMedSci

Professor of Epidemiology

Alan Ashworth, BSc PhD FMedSci FRS Professor of Molecular Biology

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The Institute of Cancer Research: Royal Cancer Hospital

Registered Office (not for enquires about the study): 123 Old Brompton Road, London, SW7 3RP tel: 020 7352 8133

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<u>Confidentiality.</u> As with all the information you have sent us, your answers will be treated in the strictest confidence and will not be disclosed to any third party, including your doctors, unless you have given us written permission to do so. The information you provide will only be used for statistical analyses. It will not be possible to identify individuals in any published results.

<u>Blood Sample.</u> Although we had planned, as we said in our Newsletter, to ask you if you would be willing to give a blood sample at this stage of the study, we have had to postpone this at present because of financial constraints. We plan to catch up with this in the future, if and when funds are available to do so.

How to answer

As previously, this questionnaire will be read by computer to make it practical to process questionnaires from the 112,000 women who are study members. Therefore, please would you write in black or blue ink and follow the instructions below:

• For questions requiring you to indicate a choice, please cross, <u>not</u> tick the box of your answer, like this:

Yes X No

• If you have made a mistake, fill in the box with the wrong answer solidly and then cross the correct answer, like this:

Yes No X

• If you are asked to provide details in words or numbers, please answer in block capitals, writing one letter or number per space, like this:

HIP or 64

• If your answer requires fewer digits than the number of boxes available, please leave the other boxes blank, like this:

6

 If you do not know the answer to a question, or the question does not apply to you, please leave it blank. Please do not strike through any sections of the questionnaire.

• If the text box is not long enough for you, please continue neatly after or underneath the box, like this:

FOR MORE THAN 5 YEARS

• If your answer requires a fraction, round this down. For instance, round down 5ft 9³/₄ inches to 5ft 9 inches.

5 feet 9 inches

• If there is not enough space for any of your answers, please complete them on the back page of the questionnaire, or write them on separate sheets and return them with the questionnaire. Please do not staple or stick the extra sheets to the questionnaire pages.

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Several of the questions in the questionnaire ask about events in your life since you joined the study. According to our records you completed your recruitment questionnaire in 2012. In various questions below we therefore ask you about events since 1st January 2012. Thank you.

If you would like to talk to someone about the study or need help with any questions you find unclear, please call a member of the research team on 020 8722 4469. They will be pleased to help.

						~ /	
1:	General information	n about you					
1.1	Is your name and address If no, please write your of	· ·		tals):	Yes] No	
	Name	First Name(s)			Surname		••••
	Home Address						
			Posts	ode			
1.2	Please confirm your date	of birth	Day	Month	Year	· · ·	
1.3	Telephone number(s) or	n which you may be con	tacted))			
	Tel.1		Ext.	Day	Eve	Either	
	Tel.2		Ext.	Day	Eve	Either	
	Contacts. We have found moved home. It would the individuals who live at diff should we lose touch with otherwise approach them f to them as members in the simply be helpful to know	refore be very helpful if ferent addresses from yo you, in order to ask ther or any purpose (unless to ir own right). They don	You would give ou, and whom you for your curre they are already It need to be me	ye below the r you would be ent contact de y members of embers of the	names of one of willing for us stails. We wo the study and a Generations	or two to contac uld not we are w Study; it	et vriting
	Contact 1: Name	First Name(s)			Surname		••••
	Home Address						
	((Postco	ode	, , , ,		
	Telephone No(s).				1 1 1 1	1 1	
	Contact 2: Name	First Name(s)			Surname		
<u> </u>	TOTAL FRANCES	•••••	••••••		······	······	····
			Postco	ode	· · ·		
	Telephone No(s).				1 1 1 1	1 1	<u>'</u>

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1.5 What is your current occupation?	
or not currently employed	
1.6 What is your current marital status? Single, never married N	Sarried Cohabiting
Widowed Separated/divorced Other, specify	
2: Your body size and shape	
2.1 Your weight. If it is practical, we would be grateful if you would weigh your down your weight in light clothes without shoes. If that is not practical, please as best you know it. (If you are currently pregnant, tell us your pre-pregnancy)	tell us your current weight
• Current weight: Stones Lbs	Kilograms
When was this measured? Today In the last few months	Not measured, it is an estimate
Measurements (pre-pregnancy if you are currently pregnant)	/
2.2 What is your waist circumference? If practical, please measure this in inche around your waist, holding the tape measure about 1 inch above your umbilion not practical, please give an estimate.	
When was this measured? Today In the last few months	Not measured, it is an estimate
2.3 What is your hip circumference? If practical please measure this in inches around the widest part of your hips. If not practical, please give an estimate. Inches or	or centimetres Centimetres
When was this measured? Today In the last few months	Not measured, it is an estimate
 2.4 What is your current bra size? (e.g. 36C, or 38FF) If you are currently pregnant or breast feeding, please give your usual pregnancy. If you have had a mastectomy, please enter your bra size b Inches 	
• Cup size (Cross only one option)	
AA B D E F G A C DD EE FF H	J Other, specify
3: Your menstrual cycle, menopause and pregnancies	
Your periods in the last 12 months	
3.1 Over the last 12 months, have you had any periods?	Yes No
→If yes, continue to Question 3.2 on next page	If no, go to Question 3.4

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3.2 How often did you usually have your periods i.e. how many days were there usually from the first day of one menstrual period to the first day of the next?
days or Don't know or Irregular cycles (could not predict within 5 days in either direction when the next period would start)
3.3 What was the usual number of days of flow?
days or Don't know or Irregular
Menopause
3.4 Have you reached the menopause (i.e. your periods have now stopped completely and you believe
permanently, and your last period was at least six months ago)?
Yes No Don't know because I am taking hormone replacement therapy (HRT), and therefore am unsure whether I have reached natural menopause
→If yes If no or don't know, go to Question 3.5
How old were you when your periods stopped completely and permanently? Don't know Don't know
What was the reason for your periods stopping?
Natural menopause While on HRT or contraception
Surgery (e.g. hysterectomy/removal Chemotherapy or radiotherapy of ovaries)
Don't know Other, specify
Before your last period how would you describe your cycle?
Regular until my last Irregular for years before my last period
period Always irregular
Did you ever have hot flushes during your menopause? Yes No
<u>Pregnancies</u>
3.5 Since 1st January 2012 have you been pregnant
(including any miscarriages, terminations, Yes No Don't know stillbirths or ectopic pregnancies)?
If no, go to Question 4.1
→ If yes, how many pregnancies have you had since 1 st January 2012, including any that started in 2011 but ended in 2012, and including any current pregnancy
3.6 Are you currently pregnant? Yes No Not sure
3.7 Please give information below on each pregnancy since 1 st January 2012, starting with the one longest ago. Please include any ectopic pregnancies, and any pregnancies that resulted in miscarriage, induced abortion or stillbirth, but <u>not</u> any current pregnancy.
Each column refers to a single pregnancy and needs to be filled in from top to bottom. The table is designed for up to 3 pregnancies. If you have had more than 3 pregnancies since 1 st January 2012, please cross here and fill in the details of the 4 th and later pregnancies on the back of the questionnaire.
(There is no need to enter pregnancies that ended before 1^{st} January 2012, because you have already told us about these in your previous questionnaire).

			Pregnai	ncies ending	g 1 st Janu	uary 20	12 or later		
3.8	Date child was born/ pregnancy ended	Day Mth	Year	Day	Mth	Year	Day	Mth	Year
3.9	Outcome of pregnancy		1 1			1 1			
	Single live born infant						<	$\langle \Box \rangle$	
	Twins, both live born							$_{7}$	
	Twins, one live born								$\backslash\!$
	Twins, both stillborn)
	Triplets or higher order bir (enter details on back page								/
	Miscarriage							\rightarrow	
	Induced abortion				\triangle				
	Stillborn child					\wedge			
	Ectopic pregnancy			<	$\langle\langle \neg$	// ,	\nearrow		
3.10	Length of pregnancy (weeks)				Š		[ı	
3.11	Did you have severe vomiting	in the first 3 n	nonths o	f pregnancy	? (i.e. ev	ery day	for at least	a week)	
	Yes		_		\mathcal{H}				
	No				\searrow				
	Don't know			_ //	,				
3.12	Did you suffer from eclampsia	or pre-eclam	sia (rais	sed blood pr	/ essure du	ring pre	egnancy)?		
	Yes		~ <	,					
	No			\Diamond					
	Don't know			>					
3.13	Sex of child, if known (if tripl	ets or more pla	ease ente	er details on	back pag	ge)			
	Boy Girl →If twins Boy-Boy								
	Boy-Girl								
	Girl _f Girl <	\cap							
3.14	Birthweight, if known (if twin,) s ør triplets or	more pl	ease enter a	letails on	back pa	ige)		
	lbs, oz	, ,	•	,		·	,[1	
	grams								
3.15	Number of weeks breast fed (Enter CUR if currently breastfeeding)							I	
3.16	Did you receive pills or hormo	one injections t	o dry up	your milk s	secretion'	?		_	
	Yes								
	No								

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3.17 Since 1 st January 2012, have you taken hormones to maintain a pregnancy (because you were at risk of miscarriage)? Yes No
4: Contraceptive pill, hormone replacement therapy and other hormonal treatments
4.1 Since 1 st January 2012, have you at any time taken:
The oral contraceptive pill ("the pill") Yes No
Other hormonal contraception (e.g. contraception that was injected or implanted under your skin or applied as a patch on your skin, or a hormone-containing contraceptive coil such as mirena). Yes No
Hormone replacement therapy (HRT) (hormonal treatment at or after your menopause or for pre-menopausal symptoms) No No No No No No No No No N
Fertility drugs or hormones to help you conceive Yes No
Any other sex hormone treatment (e.g. to prevent osteoporosis (bone loss) or heart disease, or to retain a more youthful appearance) Yes No
use and re-started again within 6 months, treat this as a single period of use; if you re-started 6 months or longer after stopping, enter this as a new episode. To help you remember the names, these are some common ones: Oral contraceptives Other hormonal contraceptives HRT
cilest femodene microgynon 30 depo-provera elleste duet livial prempak estraderm prempak prempak-C eugynon 30 marvelon ovranette evorel premique trisequens
1) Type of hormone The pill HRT Fertility drugs
Injected hormonal Other hormonal contraception Other sex hormone treatment
Name of drug, if known
• Year started Year ended or Still using
2) Type of hormone The pill HRT Fertility drugs
Injected hormonal contraception Other hormonal contraception Other sex hormone treatment
Name of drug, if known
• Year started Year ended or Still using
If you have used hormonal contraceptives or treatments for more than 2 episodes since 1 st
January 2012, please cross this box and describe the type and name of drug, and years of use, on the back page.

5: Mammograms, breast disease and breast surgery				
Mammograms	/> .			
5.1 Since 1 st January 2012, have you had a mammogram (breast X-ray)? Yes	Nø 🗆 🅎			
5.2 If yes, please give details of the mammogram you had most recently:	\\\\\			
Was it for screening? Yes No Year it was done				
Where was it done? Hospital/location				
Breast disease Town				
5.3 Since 1 st January 2012, have you been diagnosed by a doctor with any of the following. (V know about any breast diseases or injuries you had before 2012, from your previous questi there is no need to enter them here. If, however, you have had any new conditions since 1 st including for instance a second breast cancer or second benign breast lump, please described.	ionnaire, so ¹ January 2012,			
Type of disease/ abnormality/injury Yes No If yes, which breast was affected Left Right Both	If yes, year of diagnosis or injury			
Breast cancer	1 1 1			
Breast pre-cancer ("in situ" or DCIS)				
Benign breast cyst(s)				
Benign breast lump(s)				
Breast fibroadenoma				
Breast fibrocystic disease				
Mastitis				
Breast abscess				
Serious breast injury				
Any other breast abnormality or condition – specify	1 1 1 1			
If you have had more than one occurrence of any of the above since 1 st Jan 2012, please cross this box and describe the disease, side and year on the back page.				
• If you have had breast cancer or breast pre-cancer since 1 st January 2012, would you be the research team obtaining from your doctor or hospital a sample of the cancer or tumour removed, to be used for the Study research?				
Yes, I do agree Your signature				
No, I do not agree Date				

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Brea	ast operations
5.4	Since 1 st January 2012, have you undergone any breast operations, including biopsies and breast reduction or enlargement?
	→If yes, what was the type of operation?
	A cyst or fluid drained or a cyst removed Breast reduction
	Aspiration (needle) biopsy Breast enlargement
	A small sample removed by surgery (biopsy) A whole breast removed
	Part of the breast(s) or a lump removed Both breasts removed
	Breast reconstruction Other, please specify
	Where was the surgery done? Hospital
	Town
	When was the operation? Month Year
	If you have had more than one breast operation since 1 st January 2012, please cross this box and describe the operation, place and date on the back page.
6: `	Your medical history
Can	cer and benign tumours
6.1	Since 1 st January 2012, have you been diagnosed with any other type of cancer, or a benign tumour (other than in the breasts), including leukaemia, Hodgkin's disease or other lymphoma?
	→If yes If no, go to Question 6.2
	When was this diagnosed? Month Year
	What type of cancer or benign tumour was it?
	Part of body: Ovary(s) Skin Cervix Uterus (womb)
	Colon or rectum Thyroid Other, please specify

Non-Hodgkin's lymphoma

Squamous cell

carcinoma

Basal cell carcinoma (bcc;

Cancer in-

Don't know

situ

rodent ulcer)

Benign

tumour

Hodgkin's

Malignant

melanoma

disease

Type of cancer or tumour:

Cancer

Leukaemia

Other, please specify

•	Where was it treated? Hospital
	Town
•	If you have had cancer since 1 st January 2012, would you be agreeable to the research team obtaining from your doctor or hospital a sample of the cancer or tumour you had removed, to be use for the Study research?
	Yes, I do agree No, I do not agree Not applicable
	Your signature Date
•	If you have been diagnosed with a non-breast cancer or tumour more than once since 1 st January 2012, please cross this box and describe the above details on the back page.
Drug tre	atments // />
6.2 Sin	ace 1 st January 2012, have you been treated with
•	Tamoxifen (Soltanox, Nolvadex-D, Tamofen)? Yes No
•	Raloxifene (Evista)?
•	Any other drug treatment for cancer or pre-cancer? Yes No
→If	'yes'
Na	me of the drug or regimen
•	Date started Date Still using
•	Hospital at which you were treated
•	Town
	f you have had more than one episode of treatment with the above drugs since 1 st January 2012, please cross this box and describe the above details on the back page.
Radiothe	erapy (X-radiation treatments)
	nce 1 st January 2012, have you had radiotherapy to your breasts, chest, ck or axilla (armpit)?
→If	'yes', what was the condition for which you were treated?
	Breast cancer Hodgkin's disease Other cancer, specify
	Benign breast disease Thyroid disease Other, specify
	te treatment Mth Year Date treatment Mth Year stopped

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Hospital at which you were treated
Town
7: Your work
This section asks about some particular exposures at work that you might have had.
Late evening and night work
7.1 Since 1 st January 2012, have you had any jobs that regularly involved work in the late evening or night (between 10 pm and 7 am) →If 'yes',
Type of job Year started Year ended (if continuing, per week hours per day working late enter CONT) working late worked between evening or at 10pm and 7am night on these days
1)
2)
If you have had more jobs since 1 st January 2012 involving work at night, please cross this box and fill in details as above on the back page. Physical activity
7.2 In the last 12 months, which of the following best describes your physical activity at work (cross only one):-
Sedentary (spend most of the time sitting) Strenuous
Standing or walking, but not strenuous activity Not applicable, I have not been working
Outdoors/indoors
7.3 In the last 10 years, has your work been
All outdoors Mostly outdoors Partly outdoors, partly inside (or in a vehicle)
All or almost all inside (or in a vehicle) Not applicable, I have not been working
8: Alcohol, smoking and your diet
Alcohol
Since 1 st January 2012, have you drunk any alcoholic drinks? Yes No
The second description of the stopped descriptio

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8.2	In a usual week in the last 6 me (leave blank any types you did			_		. •	nk
	Red wine (glasses per week)	I	White win	ne (glasses pe	er week)		
	Rosé wine (glasses per week)		-	queurs, Marti asses per wee		er similar	
	Beer, lager, stout or cider (pints per week)			or spirits (e.g lasses (single			′,
	Other types of alcohol (glasses per week)		If other,	specify type			
8.3	On how many days in the last	7 days have y	you drunk a	lcohol?	days		
<u>Smol</u>	king						
8.4	Since 1 st January 2012, have yo (i.e. smoked most days for at le	•	•	gular smoker?	Y.	es	No
	→If yes						
8.5	How many cigarettes per day of	lid you usual	lly smoke?		\		
8.6	Do you still smoke regularly?	Yes]No	→If 'no', at	-		Years
<u>Diet</u>			> \/				
8.7	In recent months, how often v	would you u	sually eat:	\searrow			
			ss than once per week	About once per week	Most days	Once per day	Twice or more per day
	• Fresh fruit						
	Dried fruit						
	Grapefruit						
	Grapefruit juice	\mathcal{H}					
	Breakfast cereal	#					
	Salad or raw vegetables						
	Cooked vegetables (not potatoes)						

Tuna

Salmon

Other oily fish (e.g. mackerel, kippers/herring, sardines, pilchards)

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	<i></i>

8.8 Since 1st January 2012, have you at any time been treated with or taken:

			If yes, fo	or how long i	n total sind	ce 1 January 2012
	Yes	No	Years	Months	or	under 1/month
• Folic acid or folate				1		
• Vitamin D						
• Calcium						
• Cod liver oil						
• Other fish oil						>
 Multivitamins 						
• Vitamin C					>	
• Other vitamins,						
specify 8.9 What type of milk do you usu	ally have?	<				
o. what type of mink do you usu	any nave.			/	1	
Full fat Ser	ni-skimme	ed	Skimmed		Goat's or	sheep's milk
Soya milk Oth	ier milk, p	lease speci	fy		Don't dri	nk or use milk
How much milk do you us	sually drin	k per day (including milk	added to co	ffee, tea or	cereals)?
None	Less than	n ¼ pint	Abou	t ¼ pint	Abo	out ½ pint
About ¾ pint	About 1	pint	Abou	t 1 ½ pints	2 or	more pints
8.10 Coffee						
How often do you drink co	offee?	~				
Never	-/- /	ess than onc	e per week		– 6 cups j	oer week
1 cup per day	2 -	- 3 cups per	r day	4	or more c	ups per day
If you drink coffee, is it us	sually					
Instant	t decaffein	nated	Ground (e.g	. filter)	Ground	decaffeinated
8.11 <u>Tea</u>						
How often do you drink te	ea?					
Never		es than one	e per week	☐ 1	– 6 cups į	oer week
			-			
1 cup per day	2 -	- 3 cups per	r day	4	or more c	ups per day

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•	If you drink tea, is it usually
	Black leaves (e.g. PG Tips, Earl Grey) Black leaves Green Fruit or herbal
9: (Other factors
Slee	ping pattern (Please cross box) am (after midnight)
9.1	Over the last year, at what time have you usually gone to sleep on weekdays? Hours Minutes pm (before midnight) midnight
9.2	Over the last year how many hours per night have you usually slept? If you nap during the day, please add this to your total Minutes
<u>Han</u>	<u>dedness</u>
9.3	Are you naturally Right handed Left handed Ambidextrous (use both hands with equal ease)
<u>Hair</u>	colour
9.4	What was your natural hair colour aged 15 years? Blond Red/Auburn Pale brown
	Medium brown Dark brown Black Other – please specify
<u>Sun</u>	
9.5	If you had no tan and you sunbathed at noon for 2 hours every day without sunscreen in the UK in summer, would you: Always burn, never tan Burn and then tan slightly Burn minimally and tan easily
	Never or rarely burn, tan deeply Never burn, naturally dark skin
	Have you ever lived for a year or more in a country with hotter summers than the UK? Yes No No
	→ If yes, for how many years in total? For how many years in the last 10 years?
	In the last ten years have you been on a holiday abroad that was hotter than a UK summer? Yes No
	→If yes, how many weeks per year usually?
	• In the UK in summer how many hours per day do you spend out of doors during daylight hours?
_	On weekdays At the weekend
	amps
9.6	Have you ever used a sunlamp or sunbed to gain a tan, or for medical treatment (e.g. phototherapy for psoriasis)? Yes No
	If yes, how many times have you used a sunbed/sunlamp (i) ever is a last year is last year

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10: Physical activity

Exer	cise				
10.1		renuous exercise. In a normal week during ap ch time did you spend:	proximately April to Se	eptember in the last year, how	
			No of days per week you usually did this	Total time per week you did this	
	1)	Doing sports or training sufficient to get you out of breath and make you sweat considerably? (e.g. jogging, exercise machine, tennis, swimming)	Days per week	Hours Minutes	
	2)	In activities at work that get you out of breath and make you sweat considerably? (e.g. lifting, climbing ladders, building work)	Days per week	Hours Minutes	
	3)	In any other activities not covered above that get you out of breath and make you sweat considerably?	Days-per week	Hours Minutes	
10.2	Ru	nning. If you go running or jogging, how man	ay miles do you usually	run per week?	
10.3	3 Moderate & light exercise. In a normal week during approximately April to September in the last y how much time did you spend doing the following. (Please do not duplicate here any activities you described above. For instance, if you are a competitive cyclist and entered this under the 'strenuous' section, do not also include it under the cycling question below):				
			No of days per week you usually did this	Total time per week you did this	
	1)	Doing active housework? e.g. hoovering, bed making, hanging out washing, etc.	Days per week	Hours Minutes	
	2)	Doing other active jobs at home e.g. gardening, decorating, washing car, etc.	Days per week	Hours Minutes	
	3)	Walking, including to and from work, for your work, to the shops, and for pleasure?	Days per week	Hours Minutes	
	4)	Cycling, including to and from work, for your work, and for pleasure?	Days per week	Hours Minutes	
	5)	Moderate or light exercise at work, not covered above?	Days per week	Hours Minutes	
	6)	Other moderate or light exercise e.g. non-strenuous recreations?	Days per week	Hours Minutes	

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11: Space for extra d	etails		
	r providing details to any questions ab including any serious illnesses since 1		
Question number	Additional details		
12: Online communic	eations	7 7	
online questionnaire option please enter your e-mail add	members who would like to complete in future. If you would be interested ress below, or register on the study we nunicate by post, do not enter an e-main	I to complete future questionna bsite (http://bgs.icr.ac.uk/).	aires online,
Your e-mail address:			
	(Please print clearly)		
Finally, thank you for cor are very grateful for your co in the envelope provided.	mpleting this questionnaire. We appre ntribution. Please now add the date yo	ciate the time and effort it has to ou completed this questionnaire	taken, and we

We will keep in touch to let you know how the study is progressing

Office use only:

The Breakthrough Generations Study Team Sir Richard Doll Building Institute of Cancer Research 15 Cotswold Road Sutton, SURREY, SM2 5NG

Year

Month