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TITLE: Dietary Heterocyclic Amines and Polymorphic Variants in the Etiology of Prostate Cancer

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INTRODUCTION

The etiology of prostate cancer is currently unclear. There is evidence to support a link to variation in androgen metabolism. However, the role of other environmental factors is controversial. Epidemiological studies have shown an increased risk in men who eats large amounts of meat. We hypothesize that this may be related to the method of cooking the meat: cooking meat at high temperatures produces heterocyclic amines, exposure to which has been shown to cause prostate cancer in rodent models. Since these chemicals require metabolic activation to become carcinogenic, we further hypothesize that variation in key metabolic enzymes will modify the risk associated with dietary intake. We are undertaking a case-control study of 400 men with prostate cancer and 400 men without prostate cancer. All men will complete a self-administered diet questionnaire and a one hour interview; they will provide a blood or saliva samples for DNA extraction. Laboratory analyses will be conducted to genotype all subjects on a range of 17 polymorphic variants.

BODY

The tasks assigned in the first year of this epidemiological study were mainly related to finalizing the protocol and field work procedures, pilot testing study methods and questionnaires and hiring and training staff. None of the proposed tasks led to research results which would have been suitable for publication or presentation at scientific meetings. The official start of the project was April 1, 2005 when the first project coordinator was hired.

The project ran into unanticipated difficulties in September due a severe staffing crisis precipitated by one of the staff hired to the project. This crisis took nearly two months to resolve during which time progress was limited. The ultimate resolution of this crisis was the departure from the project of two of the three project staff. These staff were replaced with new employees who began work in January, 2006. It was necessary to re-do many of the administrative protocols and re-develop many of the field work methods. This delayed obtaining final IRB approval, and, unfortunately, led to a significant delay in progress towards the final targets. Further details on this will be provided in the 2006 Annual Report (by which time field work should be nearing completion). This information is provided here as context to the discussion of the SOP time line which will follow. I have also included some supplemental information about progress in the first six months of 2006 in order to document our attempts to move the project closer to the SOP time line.

Task #1:Develop study protocols, questionnaires, recruitment
procedures, etc. (Months 1-6)

- a) *The study coordinator will be hired (Month 1). (S)he will hire the interviewers.* The study coordinator was hired April 1, 2005. Unfortunately, she had to replaced in December, 2005. The initial interviewers were hired in July, 2005.
- b) *The questionnaires will be finalized and translated into French;* The questionnaires were finalized in November, 2005 (see Appendix material). However, we could not finalize the French translation until after IRB approval had been received for the final English version (in March 2006). The final French versions of the questionnaires were approved in June, 2006.

- c) The recruitment strategy will be tested in Month 4 when we will use the system to identify subjects for a pilot study. The pilot study took place on schedule. The initial group of cases was recruited in July and August. The case recruitment protocol worked successfully.
- d) The interviewers will be trained in the interview procedures. In Month 4, we will complete a pilot study using study procedures, including blood collection. The initial interviewer training took place in August, 2005. The initial plan for blood collection (using the interviewers) had to be modified since we were unable to recruit interviewers who were legally qualified to collect blood samples. The revised blood collection protocol (based on a dedicated laboratory technologist) was tested in September and worked well.
- e) The control selection methods will have been developed, including the sampling frame and a schedule for mailings to meet recruitment and matching targets. Control recruitment was also tested in summer, 2005 but the proposed strategy was not successful (imposing very high work load requirements to recruit subjects). A modified version was tested in October but results were also not acceptable. A third version was tested in spring, 2006 (delayed due to the personnel issue mentioned above) and has proven to be satisfactory. The new protocol (based on a modified random digit dialing) is currently being implemented to meet recruitment and matching targets.
- f) All field work procedures will be finalized and operational by the end of Month 5. All case recruitment procedures were finalized by the end of August, 2005. Control recruitment procedures were not finalized until spring, 2006. Administrative procedures in the research office required major revision in January, 2006 but were finalized by the end of February 2006.
- g) *The primary study data base will be prepared and ready for use by the end of Month 6.* A version of the primary data base was developed by the end of 2005. It has undergone two major revisions since then. However, all of the study databases are now fully operational.

Task #2:Recruit 400 men with prostate cancer and 400 men without prostate
cancer. Complete interviews on all of the subjects (Months 5-19).

- a) *Case recruitment will be implemented and monitored to ensure we are identifying at least* 35 new cases per month. The start of case recruitment was delayed until April, 2006 due to the major staffing issues mentioned above, complicated by delays in obtaining final IRB clearance from the HSRRB. The case recruitment protocol has been implemented to cover the period from August, 2005 to the present. For the five months of 2005, we were successful in meeting the target although interview were largely delayed until spring, 2006.
- b) *The control recruitment strategy will be implemented with a recruitment rate of 35 cases per month.* As noted above, development of the control recruitment protocol was more difficult than anticipated. The final protocol was still undergoing revision at the end of 2005.
- c) After six months of recruitment (Month 11), the recruitment success will be evaluated and adjustments to the process made as required. As already noted, the start of recruitment was delayed until month 12. As a result, no report on this SOP task can be provided for 2005.

- d) Interviews will be completed within one month of recruitment. The coordinator will monitor compliance with this target on a monthly basis. The main study interviewing had not started in 2005 so no comments are possible on this SOP task.
- e) All interviews will have been completed by the end Month 19. Still pending.

Comments On Progress In The First Six Months Of 2006

As already noted, the original timeline required substantial revision due to serious personnel issues. The main field work for the project began in late April, 2006 following the receipt of final IRB approvals. A detailed report on the field work will be included in the 2006 Annual report. However, the following information is included as additional material in the 2005 report in order to document our progress on the SOP task.

- a) *Case recruitment will be implemented and monitored to ensure we are identifying at least* 35 new cases per month. The start of case recruitment was delayed until April, 2006 due to the major staffing issues mentioned above, complicated by delays in obtaining final IRB clearance from the HSRRB. Case recruitment covers the period from August, 2005 to the present. Over that time period (10 months), we have identified about 600 candidate cases (about 60 new candidate cases per month). This is producing about 35-40 recruited subjects for each month of recruitment. We are on target to complete case recruitment by around January, 2007 (month 21).
- b) The control recruitment strategy will be implemented with a recruitment rate of 35 cases *per month.* As noted above, development of the control recruitment protocol was more difficult than anticipated. The current protocol will be generating control subjects at a rate of about 80 per month in order to ensure that the final sample targets are met by the end of 2006. We now have three staff working exclusively on control recruitment.
- c) After six months of recruitment (Month 11), the recruitment success will be evaluated and adjustments to the process made as required. We have been undertaking a monthly review of the recruitment process. The only major adjustments required have been to the control recruitment protocol. We are currently achieving our targets for cases and anticipate that control targets will be met shortly.
- d) Interviews will be completed within one month of recruitment. The coordinator will monitor compliance with this target on a monthly basis. Once we received IRB approval, most interviews are being completed within two weeks of being assigned to the interviewer. Numerical details will be provided in the 2006 annual report since this task relates to operations in 2006, not 2005.
- e) All interviews will have been completed by the end Month 19. Still pending.

Task #3: PSA testing will be completed on controls within two weeks of collecting the sample. We expect to test around 450 people. (Months 5-19).

Our local IRB refused to approve PSA testing on our control subjects (September, 2004). Despite multiple attempts to change the opinion of the IRB, they refused to authorize this component of the project. This was brought to the attention of the HSRRB in 2004. As a result, this PSA testing component was dropped from the protocol. We have retained a question in the interview which obtain a record of any PSA tests which were done in the five years prior to interview.

Task #4:Conduct the calibration sub-study by collecting urine sample on
50 cases and 50 controls (Months 5-21).

Finally design and implementation of the calibration study have been deferred until 2006. Three main factors have contributed to this decision. First, personnel issues required that we focus our efforts on implementing the primary study protocol before developing the calibration protocol. Second, discussion of the proposed urine collection protocol identified a number of significant problems, including the difficulty and cost of 24 hour urine collection and the issue about the appropriateness of urinary metabolites as markers of dietary intake, Third, the rise in the value of the Canadian dollar has had a major impact on the available budget; priority has been assigned to completing the primary study interviews.

It was decided that the calibration study would rely on protein adducts of the key heterocyclic amines. By the end of 2005, the detailed protocol for this component of the study was still under development.

Task #5:Extract DNA from blood samples and complete genotyping of
all samples (Months 7-22)

- a) *DNA will be extracted from each blood sample within two weeks of collecting the sample.* This target was met for the pilot samples. In fact, the new field work protocol ensures that all blood sample processing will be completed within 6 hours of sample collection.
- b) Genotyping will be performed in batches of 400 samples. The first genotyping will be completed by Month 13. Final genotyping will be completed by Month 22. We have undertaken preliminary genotyping to test protocols, etc. However, this task is not relevant for the 2005 Annual Report.

Task #6:Enter all data into the study data base and perform data editing
and verification (Months 7-22)

We have tested all data entry procedures. Two main databases have been created. The first maintains a tracking record of all candidate cases, identified only by an anonymous tracking ID. The second contains all of the study materials on eligible subjects, with subjects identified by the assigned study ID. The data procedures have been tested using the pilot data. Further effort on this task relates mainly to activities to take place in 2006.

Task #7:Convert food and cooking information into nutrient and
heterocyclic amine levels (Months 12-22)

This task is not relevant for the 2005 Annual Report. However, we have developed analysis protocols to undertake these tasks for another project. These methods will have direct application to the current study and will be reported on in more detail in the 2006 annual report.

Task #8:Final analyses and preparation of scientific reports (Months 18-
26)

No data analyses nor scientific reports were possible in 2005 since the main field work had not yet started.

KEY RESEARCH ACCOMPLISHMENTS

In the first year of an epidemiological study, the scientific accomplishments are usually limited. Unlike laboratory based research, the initial phases of epidemiological research do not involve publishable work but rather reflect the need to develop protocols and methods of data collection. The key accomplishment of the first year of this project is that we are ready to begin field work despite a serious problem with staffing in the fall of 2005. The following tasks were completed:

- Development of all study protocols and field work methods;
- Hiring of staff;
- Pilot testing of field work methods;
- Development of databases

REPORTABLE OUTCOMES

As noted above, the stage of the research is too early to have produced significant scientific outcomes. We have produced detailed study databases which would be considered a reportable outcome (although one of limited interest except to the study staff). We have attached copies of the final study questionnaires as Appendices to this Annual Report.

As a result of this funding, I am collaborating with colleagues to extend the project into a followup of the case group to determine outcomes. We propose to use the archived blood samples to search for biomarkers which are predictive of treatment response and prognosis.

CONCLUSION

The project has now reached the point at which major progress on subject recruitment and interviewing will being to occur. No scientific results are yet available, nor were they expected by the end of 2005. Most of my conclusions will relate to process issues.

- Case recruitment based on review of pathology records can function smoothly.
- Control recruitment has, on the other hand, proved to be more difficult than expected (this is counter to accepted epidemiological teaching). The current legislative environment to enhance privacy has imposed a serious problem in finding suitable control subjects. Control recruitment has essentially been reduced to one strategy: Random Digit Dialling. Standard approaches to random digit dialling are very resource demanding. We had to develop a modified method (in which we use the telephone number of each new case as the base to generate the candidate control telephone numbers).
- Some problems have been encountered, most of which were not foreseeable. The hiring of the initial project coordinator created a work environment which impeded smooth progress. Unfortunately, this situation was made worse when a second staff was hired who rapidly developed a serious personal aversion to working with the coordinator. This dysfunctional team impeded progress. The situation came to a head in September, 2005 but required a further two months to resolve (when both of the staff declined to renew their contracts) and a further two months to find replacement staff. The new staff are working very effectively and form a strong team. Unfortunately, considerable disruption in the project timeline and planning resulted from the staffing problems which are still causing problems.

• Issues in currency conversion can have a profound impact on study viability. Since we developed our initial proposal, the Canadian dollar has risen in value by 20%. Even though I assumed some increase in value when I developed the budget, the increase has been much higher than anticipated and has reduced the available budget by about 10%. This has had a major impact on the resources available for the project. It might be helpful in the future for the funding agency to consider an award process which would include some protection from currency fluctuations.

APPENDICES

- 1)
- Self-administered Questionnaire Interviewer administered questionnaire 2)

OFFICE USE ONLY:	
Study ID: <u>S4-</u>	Date Checked: DD MM YYYY
Interviewer ID:	Date Entered: DD MM YYYY
Date Returned: DD MM YYYY	Date Verified: DD MM YYYY

ProtateCaner EtidogyStudy

INSTRUCTIONS

Thank you for taking part in this study. The first part of the questionnaire asks about your usual diet **ten years ago.** When you answer these questions, think back about where you worked and lived, what your usual leisure activities were, and whether you generally packed your lunch or ate out a lot. This will help you remember what your usual diet was like **ten years ago**. The second part of the questionnaire asks about your work, substances you may have been exposed to, and your physical activity level. The whole questionnaire will take about 60 minutes to complete.

Most of the questions are answered by placing a clear mark (\checkmark or \checkmark) in the box which is your answer. Some questions will require you to print short answers. Please use the pencil provided to complete the questionnaire. This way, if you make a mistake, you can erase it and print the correct answer.

We know that it is hard to think back in time, but your best estimate is better than leaving a question blank. Remember that all your information will remain strictly confidential.

FOR FURTHER INFORMATION, CONTACT US AT:

Prostate Cancer Etiology Study

Room 1114, Department of Epidemiology and Community Medicine, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, K1H 8M5 phone: (613) 562-5641, fax: (613) 562-5649, e-mail: pces@uottawa.ca First, we need to ask about vitamins, minerals and other supplements you may have taken.

Ten years ago, did you take any multivitamins? 1.

	\Box yes, fairly regularly	□yes,	but not regularly	□no
If YF	ES, please complete this	: Table	(Go to Questio	n 2)
			How many multi	vitamin tablets o

	How many multivitamin tablets did you take 10 years ago?								
Multivitamins (e.g. One-a-Day or Centrum-type). Answer for up to two most frequently used.	none or less than 1 per week	1-3 per week	4-6 per week	1 per day	2 per day	3 per day	4 per day	5+ per day	
print name:									
print name:									

Ten years ago, did you take vitamins or minerals that were NOT part of a multivitamin? 2.

□yes, fairly regularly □yes, but not regularly □no												
(Go to Question 5) If YES, please complete this Table.												
How many vitamin or mineral tablets did you take 10 years ago?												
Vitamins or Minerals taken thatnone or less than 1 per1-3 per4-6 												
Beta-carotene												
Vitamin A												
Vitamin C												
Vitamin E												
B-complex vitamins												
Calcium supplements or calcium containing antacids (e.g. Tums)												
Vitamin D on its own or as part of a calcium supplement												
Iron												
Zinc												
Selenium												

3.	Ten years ago, what	was the st	rength of yo	our Vitamin E table	?
		⊐ _{400 וU}		on't know	
	□ _{200 IU} □	⊐ ₁₀₀₀ וט	🗆 I di	d not take vitamin E ten	vears ago
4.	Ten years ago, what	was the st	rength of yo	our Vitamin C table	1?
	□ _{100 mg} □	∃ _{500 mg}		on't know	
	□ _{250 mg} [] 1000 mg	🗆 I di	d not take vitamin C ten	years ago
	·	-			
5.	Ten years ago, whic (mark all that apply)		supplement	s did you take mor	e than once per week?
	Cod liver oil		□ _{Garlic}		□ _{Saw palmetto}
	Fish oil (Omega-3 fatty		_	merican or Asian)	\Box St. John's wort
		acids)		merican or Asian)	
	\Box_{Folic} acid/folate		□ _{Green} tea		└─None of these supplements
The	next questions ask a	bout the wa	ay your food	l was prepared 10 ي	/ears ago.
6.					k your food (e.g. to fry,
6.	Ten years ago, what stir-fry, saute, etc.)?				k your food (e.g. to fry,
6.	stir-fry, saute, etc.)?	(mark onl			k your food (e.g. to fry,
6.	stir-fry, saute, etc.)?	(mark onl		b)	
6.	stir-fry, saute, etc.)?	(mark onl			
6.	stir-fry, saute, etc.)?	(mark onl	y one or two	Go to Question	n 7
6.	stir-fry, saute, etc.)?	ok my food ■	y one or two	Go to Question	n 7
6.	stir-fry, saute, etc.)?	y (mark onl ok my food ━ □ Olive □ Can	y one or two e oil ola oil	Go to Question Lard, fatback, baco	n 7
6.	stir-fry, saute, etc.)?	ok my food	e oil ola oil	Go to Question	n 7
6.	stir-fry, saute, etc.)?	e (mark onl ok my food – Olive Can e Corr	y one or two e oil ola oil n oil flower oil	Go to Question □Lard, fatback, baco □Non-stick spray (e.e. □Other fat	n 7
6.	stir-fry, saute, etc.)?	e (mark onl ok my food – Olive Can e Corr	e oil ola oil	Go to Question □Lard, fatback, baco □Non-stick spray (e.e. □Other fat	n 7
6.	stir-fry, saute, etc.)?	e (mark onl ok my food – Olive Can e Corr	y one or two e oil ola oil n oil flower oil	Go to Question □Lard, fatback, baco □Non-stick spray (e.e. □Other fat	n 7
6.	stir-fry, saute, etc.)?	e (mark onl ok my food – Olive Can Can Corr Sun Othe	y one or two	Go to Question Lard, fatback, baco Non-stick spray (e.) Other fat	n 7
	stir-fry, saute, etc.)?	(mark onl ok my food - Olive Can Can Corr Sun Othe	y one or two ola oil flower oil er vegetable oils	Go to Question Lard, fatback, baco Non-stick spray (e.g. Other fat s t often put on your	n 7 n fat g. PAM) vegetables, potatoes,
	stir-fry, saute, etc.)?	(mark onl ok my food - Olive Can Can Can Sun Othe t kinds of fa	y one or two ola oil flower oil er vegetable oils	Go to Question Lard, fatback, baco Non-stick spray (e.g. Other fat s t often put on your	n 7 n fat g. PAM) vegetables, potatoes,
	stir-fry, saute, etc.)?	(mark onl ok my food - Olive Can Can Can Sun Othe t kinds of fa	y one or two	Go to Question Lard, fatback, baco Non-stick spray (e.) Other fat t often put on your mark only one or two	n 7 n fat g. PAM) vegetables, potatoes,
	stir-fry, saute, etc.)?	(mark onl ok my food - Olive Can Can Can Sun Othe t kinds of fa	y one or two	Go to Question Lard, fatback, baco Non-stick spray (e.g. Other fat s t often put on your	n 7 n fat g. PAM) vegetables, potatoes,

8. Ten years ago, how often did you eat a low-fat or non-fat version of these foods?

Cheese	□Often/always low-fat	□ _{Sometimes}	□ _{Rarely/never} low-fat	Didn't eat it
Yogurt	□ _{Often/always} low-fat	□ _{Sometimes}	□ _{Rarely/never low-fat}	Didn't eat it
Salad dressing	□ _{Often/always} low-fat	□ _{Sometimes}	□ _{Rarely/never low-fat}	Didn't eat it
Ice cream	□Often/always low-fat	□ _{Sometimes}	□ _{Rarely/never} low-fat	Didn't eat it

9.	Ten years ago			
	How often did you add salt to your food?	Often/Always Dometimes	□ _{Rarely/never}	
	How often did you add pepper to your food?	Often/Always Sometimes	□ _{Rarely/never}	
	How often was your chicken cooked with its skin?	Often/Always Sometimes	□ _{Rarely/never}	Didn't eat chicken
	How often did you eat the skin on chicken?	□ _{Often/Always} □ _{Sometimes}	□ _{Rarely/never}	Didn't eat chicken
	How often did you eat the fat on meat?	□ _{Often/Always} □ _{Sometimes}	□ _{Rarely/never}	Didn't eat meat

10. Ten years ago, about how often did you eat the following foods from restaurants or carry-outs/take-outs? Remember to think about all meals (breakfast, lunch, dinner and snacks).

Number of Visits Ten Years Ago												
Restaurant Food	never	1-4 times per year	5-11 times per year	1-3 times per month	once a week	2-4 times per week	almost every day					
Fried Chicken												
Burgers												
Pizza												
Chinese Food												
Mexican Food												
Fried Fish												

11. This section asks about your *usual* eating habits ten years ago.

- **FIRST:** Mark (or X) the column to show how often, on average, you ate the food ten years ago. Please DO NOT SKIP any foods. If you never ate a food, mark the "never or less than once per month" column. Please BE CAREFUL which column you put your mark in.
- **SECOND:** Mark whether your usual serving size was small (S), medium (M) or large (L). The medium serving size is provided for each food. A small serving is about one-half the medium serving or less. A large serving is about one-and-a-half times the medium serving or more.

If you NEVER ate the food or you ate the food less than once per month, DO NOT complete the serving size.

EXAMPLE

Ten years ago, Hank drank orange juice once a day, about 1 $\frac{1}{2}$ glasses each time. He ate white bread less than once per month.

This is how Hank would complete his Table.

TEN YEARS AGO		HOW OFTEN							HOW MUCH				
TYPE OF FOOD	never or less than	1 ner	2-3	1 ner	2 per	3-4 per	5-6 per	1 per	2+			r Ser Size	ving
	once per month	per mon	per mon	per week		week		day	per day	Medium Serving	S	М	L
Orange juice or grapefruit juice								\checkmark		8 oz. glass			\checkmark
White bread (including sandwiches, bagels, burger rolls, French or Italian bread)	4									2 slices			

NOW TURN THE PAGE AND COMPLETE YOUR TABLE

TEN YEARS AGO	HOW OFTEN							HOW MUCH					
TYPE OF FOOD	never or less than once per	1 per	2-3 per	1 per	2 per	3-4 per	5-6 per	1 per	2+ per	Medium		r Ser Size	
	month	mon	mon	week	week	week	week	day	day	Serving	5	М	L
FRUITS AND JUICES													
Apples, applesauce, pears										1 medium or ½ cup			
Bananas										1 medium			
Peaches, apricots (fresh or canned)										1 medium or ½ cup			
Cantaloupe (in season)										1/4 medium			
Cantaloupe (rest of year)										1/4 medium			
Watermelon (in season)										1 slice			
Strawberries (in season)										½ cup			
Oranges										1 medium			
Grapefruit										½ medium			
Orange juice or grapefruit juice										6 ounce glass			
Fruit drinks with added vitamin C, such as Hi-C										6 ounce glass			
Any other fruit, including berries, fruit cocktail, grapes										½ cup			
BREAKFAST FOODS						•							
High fiber, bran or granola cereals, shredded wheat										1 medium bowl			
Other cold cereals, such as corn flakes, Rice Krispies										1 medium bowl			
Cooked cereal, or grits										1 medium bowl			
Milk on cereal										½ cup			
Sugar added to cereal										2 teasp			
Eggs										2 eggs			
Bacon										2 slices			
Sausage										2 patties or links			

TEN YEARS AGO	HOW OFTEN								HOW	/ MU	СН		
TYPE OF FOOD	never or less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving		r Ser Size M	
VEGETABLES			1		1		l	1	1				<u> </u>
String Beans, green beans										½ cup			
Peas										½ cup			
Chili with beans										3/4 cup			
Other beans such as baked beans, pintos, kidney, limas and lentils										3/4 cup			
Tofu and foods with soya or vegetable proteins										½ cup			
Corn										½ cup			
Winter squash/baked squash										½ cup			
Tomatoes, tomato juice										1 medium or 6 oz. glass			
Red chili sauce, taco sauce, salsa picante										2 tablesp			
Broccoli										½ cup			
Cauliflower or Brussels sprouts										½ cup			
Spinach (raw)										3/4 cup			
Spinach (cooked)										½ cup			
Mustard greens, turnip greens, collards										½ cup			
Cole slaw, cabbage, sauerkraut										½ cup			
Carrots, or mixed vegetables containing carrots										½ cup			
Green, red, yellow sweet peppers										½ cup			
Green salad										1 medium bowl			
Regular salad dressing & mayonnaise, including on sandwiches or in potato salad, etc.										2 tablesp			
French fries and fried potatoes										3/4 cup			
Sweet potatoes, yams										½ cup			

TEN YEARS AGO	HOW OFTEN H							HOW	V MUCH				
TYPE OF FOOD	never or less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving	You S	r Ser Size M	-
VEGETABLES (continued	l)											<u> </u>	
Other potatoes, including boiled, baked, mashed & potato salad										1 medium or ½ cup			
Rice										3/4 cup			
Any other vegetable, including cooked onions, summer squash										½ cup			
Butter, margarine or other fat added to vegetables, potatoes, etc.										2 teasp			
MEAT, FISH, POULTRY, L	UNCH I	TEMS	\$										
Hamburgers, cheeseburgers, meatloaf, beef burritos, tacos										1 medium or 4 ounces			
Beef (steaks, roasts, etc., including sandwiches)										4 ounces			
Beef stew or pot pie with carrots or other vegetables										1 cup			
Liver, including chicken livers										4 ounces			
Pork, including chops, roasts										2 chops or 4 ounces			
Other meats (veal, lamb, game, etc.)										4 ounces			
Fried chicken										2 small or 1 large piece			
Chicken or turkey other than fried (including on sandwiches)										2 small or 1 large piece			
Fried fish or fish sandwich										4 ounces or 1 sandwich			
Tuna, tuna salad, tuna casserole										½ cup			
Oysters										5 pieces, 1/4 cup or 3 oz.			
Shell fish, (shrimp, crab, lobster, etc.)										5 pieces, 1/4 cup or 3 oz.			
Other fish (broiled or baked)										2 pieces or 4 ounces			
Spaghetti, lasagna, other pasta with tomato sauce.										1 cup			

TEN YEARS AGO				HOW	OFT	EN			HOW MUC				
TYPE OF FOOD	never or less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving		r Ser Size M	-
MEAT, FISH, POULTRY, L		TEMS	i (con	itinue	ed)			I		<u> </u>		<u> </u>	<u> </u>
Pizza										2 slices			
Mixed dishes with cheese (such as macaroni and cheese)										1 cup			
Liverwurst										2 slices			
Hot dogs										2 hot dogs			
Ham, bologna, salami and other lunch meats										2 slices or 2 ounces			
Vegetable and tomato soups, including vegetable beef, minestrone										1 medium bowl			
Other soups										1 medium bowl			
BREADS, SNACKS, SPRE	ADS	-											
Biscuits, muffins, (including fast foods)										1 medium piece			
White bread (including sandwiches, bagels, burger rolls, French or Italian bread)										2 slices			
Dark bread, such as wheat, rye, pumpernickel, (including sandwiches)										2 slices			
Corn bread, corn muffins, corn tortillas										1 medium piece			
Salty snacks, such as potato chips, corn chips, popcorn										2 handfuls or 1 cup			
Peanuts, peanut butter										2 tablesp			
Margarine on bread or rolls										2 teasp			
Butter on bread or rolls										2 teasp			
Gravies made with meat drippings, or white sauce										2 tablesp			
DAIRY PRODUCTS (exclu	iding mi	lk dri	nks)										
Cottage cheese										½ cup			
Other cheeses and cheese spreads										2 slices or 2 ounces			
Flavored yogurt, frozen yogurt										1 cup			

TEN YEARS AGO		HOW OFTEN								HOW	MU	СН	
TYPE OF FOOD	never or less than	1 per	2-3 per	1 per	2 per	3-4 per	5-6 per	1 per	2+ per			r Ser Size	-
	once per month	mon		week				day	day	Medium Serving	S	М	L
SWEETS													
Ice cream										1 scoop or ½ cup			
Doughnuts, cookies, cake, pastry										1 piece or 3 cookies			
Pumpkin pie, sweet potato pie										1 medium slice			
Other pies										1 medium slice			
Chocolate candy										1 small bar or 1 oz.			
Other candy, jelly, honey, brown sugar										3 pieces or 1 tablesp			

CONTINUES ON NEXT PAGE ...

PLEASE NOTE THE "HOW OFTEN" CATEGORIES HAVE CHANGED!													
TEN YEARS AGO				ном	OFT	EN				ном	MU	ІСН	
TYPE OF FOOD	never or less than once per month	1-3 per mon	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6+ per day	Medium Serving	You S	r Ser Size M	•
BEVERAGES			1	1	1			1					
Whole milk and beverages made with whole milk (not including on cereal)										8 oz. glass			
2% milk and beverages made with 2% milk (not including on cereal)										8 oz. glass			
Skim milk, 1% milk or buttermilk and beverages made with these milks (not including on cereal)										8 oz. glass			
Soya drink										8 oz. glass			
Regular soft drinks (not diet soda)										12 oz can or bottle			
Diet soft drinks										12 oz can or bottle			
Beer										12 oz can or bottle			
Wine or wine coolers										1 medium glass			
Liquor										1 shot			
Coffee, regular or decaf										1 medium cup			
Tea (hot or iced)										1 medium cup			
Lemon in tea										1 teasp			
Non-dairy creamer in coffee or tea										1 tablesp			
Cream (real) or Half-and-Half in coffee or tea										1 tablesp			
Milk in coffee or tea										1 tablesp			
Sugar in coffee or tea										2 teasp			
Glasses of water										8 oz. glass			

Thank you! You have completed the diet section of the questionnaire. This would be a good time to take a break if you need one.

YOU' RE ALMOST DONE!

This part of the questionnaire asks about your primary occupation and pesticides you may have been exposed to in your work or daily life. For these questions, think about your entire life, NOT just ten years ago.

12. Have you ever been employed? □¥es □No (Go to Quest



If YES, please complete this Table for the occupation you held the LONGEST. The same type of work done for different employers or under different job titles is considered the same occupation.

What occupation did you hold the longest?	What were your duties in this occupation?	How long did you work in this occupation?
		Years

13. Have you ever personally applied pesticides to fields, crops, food, livestock or buildings (e.g. herbicides, insecticides, fungicides, fumigants)? Do not include applications to your own lawn, garden, fruit trees or home.

⁄es	□ _{No} □Don't Know	
If YES:	How many years have you done this task at least on	ce? year(s)
	During those years, how many days per year, on av task? day(s)/year	erage, did you do this

14. Have you ever personally applied pesticides to your own lawn, garden, fruit trees, or home (e.g. herbicides, insecticides, fungicides, fumigants)?

ΠY	es	□ _{No}	Don't Know
	If YES:		e you done this task at least once? year(s) now many days per year, on average, did you do this)/year

The last section of the questionnaire asks about the physical activity level of your work and leisure time activities.

15. Let's start with your work. Below is a list of different types of work:

SEDENTARY WORK: most of your time is spent sitting, e.g. office work, etc.

STANDING WORK: most of your time is spent standing or walking without intense physical effort, e.g. shop assistant, barber, etc.

PHYSICAL WORK: involves some physical effort including handling of heavy objects and use of tools, e.g. plumber, carpenter, etc.

HEAVY MANUAL WORK: involves very vigorous physical activity including handling of very heavy objects, e.g. miner, construction worker, etc.

For each decade of your life, print the number of years you worked. Include part-time, contract and seasonal work. If you worked in the decade, indicate if you **USUALLY** worked full-time (FT) or part-time (PT) hours, and mark the **ONE** category which best describes the physical activity level of your work in the decade. Complete all decades relevant for your age.

				-	cal Activity L		
Decade of Your Life	Years Worked in Decade	Usual FT	Status PT or Less	Sedentary Work	Standing Work	Physical Work	Heavy Manual Work
Example	<u>9 ½</u> yrs						
20-29	yrs						
30-39	yrs						
40-49	yrs						
50-59	yrs						
60-69	yrs						
70-79	yrs						
80-89	yrs						

16. Finally, this question asks about leisure time physical activity, NOT physical activity done as part of your employment or household/outdoor chores.

We are interested in two intensities of physical activity:

STRENUOUS PHYSICAL ACTIVITY: causes your heart to beat rapidly and sweating, e.g. running, vigorous swimming, etc.

MODERATE PHYSICAL ACTIVITY: is not exhausting and causes light perspiration, e.g. fast walking, popular and folk dancing, etc.

For each decade of your life, estimate how many times per week and minutes per session, on average, you spent doing moderate and strenuous leisure time physical activity. Only count physical activity sessions that lasted 10 minutes or longer in duration. Print 0 on the line if you did less than 10 minutes in the activity level. Complete all decades relevant for your age.

Decade of	Moderate Phy	sical Activity	Strenuous Ph	ysical Activity
Your Life	Times Per Week	Minutes Per Session	Times Per Week	Minutes Per Session
Example	<u> </u>	<u>60</u> minutes	<u> 0 time(s)</u>	<u>0</u> minutes
20-29	time(s)	minutes	time(s)	minutes
30-39	time(s)	minutes	time(s)	minutes
40-49	time(s)	minutes	time(s)	minutes
50-59	time(s)	minutes	time(s)	minutes
60-69	time(s)	minutes	time(s)	minutes
70-79	time(s)	minutes	time(s)	minutes
80-89	time(s)	minutes	time(s)	minutes

YOU A RE D ONE!

Thank you very much for taking the time to complete this questionnaire. Your participation is sincerely appreciated.

Remember.....

- 1. Your interviewer will pick up this questionnaire when she/he meets with you.
- 2. All your information will remain strictly confidential.

OFFICE USE ONLY:		
Study ID:	<u> </u>	Interview Outcome Code:
Interviewer ID:	<u> </u>	Date Checked: DD MM YYYY
Date of Interview:	LII DD MM YYYY	Date Entered: DD MM YYYY
Time Interview Began:	(hhmm)	Date Verified:
Time Interview Ended:	(hhmm)	DD MM YYYY

ProtateCaner Etidogy Study



ManQuetionare

Principal Investigator:

Dr. Nicholas Birkett Department of Epidemiology and Community Medicine University of Ottawa 451 Smyth Road Ottawa, Ontario, K1H 8M5 PCES Research Office: 613-562-5641

GENERAL INTRODUCTION

In this interview, I will be asking you questions about several areas of your life including medical history, diet, lifestyle, outdoor activity and general information about yourself.

Most of the questions will ask you to think back in time. I realize this can be difficult, but your best estimate is better than no answer.

You can decline to answer any question. I will simply move on to the next question.

Remember that all the information you provide will remain strictly confidential.

Do you have any questions about what is going to happen?

Interviewer answers all questions before proceeding.

	SECTION A				
To sta	To start off, I need to know how old you are.				
A1.	May I have your date of birth?	 DD MM YYYY			
A2.	So that would make you years old? Is that right?	Tes No			
	<i>If NO, correct the date of birth until the answer is yes.</i>				

SECTION B MEDICAL FACTORS

The first series of questions will ask about your height and weight.

B1.	How tall are you without shoes?	ftin. ORcms
B2.	What was the most you ever weighed since the age of 20?	pounds ORkgs
B3.	How old were you when you first weighed <weight b="" in<=""> <i>previous question</i>>?</weight>	Years

B4.	What was your usual weight when you were in your?					
a.	20's	pounds ORkgs				
b.	30's	pounds ORkgs				
c.	40's	pounds ORkgs				
d.	50's 🔲 NA	pounds ORkgs				
e.	60's 🔲 NA	pounds ORkgs				
f.	70's 🔲 NA	pounds ORkgs				
g.	80's 🔲 NA	pounds ORkgs				

ft. in.	5' 2"	5' 4"	5' 6"	5' 8"	5' 10"	6'	6' 2"	6' 4"	6' 6"	6' 8"
cms	157	163	168	173	178	183	188	193	198	203
pounds	120	140	160	180	200	220	240	260	280	300
kilograms	55	64	73	82	91	100	109	118	127	136

Thank you. Now I am going to ask about your medical history. First we will discuss medical conditions diagnosed before **<reference month>**.

B5.	Prior to < reference month> , has a doctor ever told you that you had	B6.	When were y	ou first	told that you had
a.	high blood pressure?		Year	OR	Age
b.	high blood cholesterol?		Year	OR	Age
c.	diabetes mellitus?		Year	OR	Age
d.	a chronic liver disease, such as cirrhosis or fibrosis of the liver?		Year	OR	Age
e.	an enlarged prostate gland?		Year	OR	Age
f.	blood in your sperm?		Year	OR	Age
g.	blood in your urine?		Year	OR	Age
h.	a urinary tract infection?		Year	OR	Age
i.	inflammation of the prostate?		Year	OR	Age

Thank you. Now I am going to ask about medications you took regularly before *<reference month>*. Regularly means two or more times a week for one month or longer.

B7.	Prior to < reference month> , have you ever regularly taken	B8. When was the first time you regularly used	B9. When was the last time you regularly used
a.	Aspirin or ASA?	Year ORAge	Year_ORAge
b.	Tylenol or acetaminophen?	Year ORAge	Year_ORAge
c.	Non-steroidal anti-inflammatory drugs or NSAIDS? Here are some examples. <i>Supply prompt card.</i> Yes	Year ORAge	Year_ORAge
d.	ACE inhibitors? These medications are used to treat high blood pressure or congestive heart failure. Here are some examples. Supply prompt card. Yes	Year ORAge	Year_ORAge
e.	alpha blockers? These medications are used to treat high blood pressure or urinary obstruction caused by an enlarged prostate. Here are some examples. Supply prompt card. Yes No	Year ORAge	Year_ORAge
f.	testosterone replacement using pills, injections, patches, or gel?	Year ORAge	Year_ORAge
g.	estrogens?	Year ORAge	Year_ORAge

B7.	Prior to < reference month> , have you ever regularly taken	B8. When was the first time you regularly used	B9. When was the last time you regularly used
h.	Lipitor Yes No	Year ORAge	Year_ORAge
i.	Lovastatin or Mevacor	Year ORAge	Year_ORAge
j.	Simvastatin or Zocor	Year ORAge	Year_ORAge
k.	other medications to lower your cholesterol?		
I.	<i>If yes:</i> What other medications did you use regularly? i)	Year ORAge	Year_ORAge
m.	ii)	Year ORAge	Year_ORAge

Thank you. Now I am going to ask about medical procedures you may have had before *<reference month>*.

B10.	Prior to <reference< b=""> month>, have you ever had</reference<>	 B11. When did you first have (Ask regarding 2nd occurrence as well) Did you haveagain? When? 	 B12. Why did you have the procedure? (Ask regarding 2nd occurrence as well) Why did you have the procedure this time?
а.	abdominal surgery? For example to remove a gall bladder or an appendix.	1Year OR Age specify: Age 2Year OR Age	
b.	a transurethral resection of the prostate or TURP?	specify: 1Year ORAge	
		2Year ORAge	
C.	prostate heat therapy such as microwave therapy, radiofrequency therapy, electrovaporization, or	1Year ORAge	
	laser therapy?	2Year ORAge	
d.	a vasectomy?	1Year ORAge	
		2Year ORAge	
e.	a circumcision?	1Year ORAge	
		2Year ORAge	

Thank you. That is the end of the list of medical procedures. Next, I am going to ask about a blood test used to check for prostate cancer. It is sometimes called the PSA test.

B13. **Cases**: Prior to **<surgery/biopsy date>**, have you ever had a blood test to check for prostate cancer?

Yes No If No, DK, or Ref go to B17.

Controls: Have you ever had a blood test to check for prostate cancer?

I would like to know more about your PSA tests. Let's start with the most recent and work backwards in time.

B14.	When was recent test	your (most /n ?	ext most)		Do you remen whether your o said the test w normal or elev	doctor ⁄as	B16.	Do you rememb actual le	
a	Year	Month OF	RAge	Norr	nal Elevated	⊡ок		ng/ml	Дрк
b	Year	Month OF	RAge	Norr	nal Elevated	⊡рк		ng/ml	□ок
C	Year	Month OR	Age	Norr	nal Elevated	⊡ок		ng/ml	□ок
d	Year	Month OF	RAge	Norr	nal Elevated	□ск		ng/ml	□ок
e	Year	Month OF	RAge	Norr	nal Elevated	Пок		ng/ml	□ок
f	Year	Month OF	RAge	Norr	nal Elevated	Прк		ng/ml	□рк

Thank you. doctor.	Now I am going to ask about all ca	ancers	or tumours you n	nay hav	ve had diagnosed by a
Cases:	Have you ever been diagnosed with cancer other than prostate cancer?			es [No
Controls: Have you ever been diagnosed with cancer?		If No go to B19.			
	type of cancer did a doctor say ad? Let's start with the most	B18.	When was this	first dia	agnosed?
	t and work backwards in time.		(After complete any other cand		8, prompt to report tumours)
(Reco	ord answer verbatim)		···· , · ·····		
a			Age	OR	Year
b			Age	OR	Year
 C.					
			Age	OR	Year
d			Age	OR	Year
e			Age	OR	Year
Use end pages if more space needed.					

Thank you. That's the end of the questions about your medical history. Now, we are going to move on to your family history. I have some questions about your biological father, brothers, and sons.

If respondent states that they were adopted, ask if they have any information about their biological father or full brothers. If so, continue. If not, check here and go to B26.

Let's start with your biological father.

B19.	QUESTION	FATHER
a.	Do you have any information about your father?	
		If No, DK or Ref go to B20.
b.	What year was he born?	Year
C.	Is he still living?	
d.	lf no:	
	What year did he die?	Year
e.	Did he ever have cancer?	Yes No
		If No, DK or Ref go to B20.
f.	lf yes:	#1:
	What type(s) of cancer did he have?	
	Use end pages if more space needed.	
		#2:
g.	When was the cancer diagnosed?	#1:Age ORYear #2:Age ORYear
Now let's move on to your full brothers. These are brothers who have the same biological parents as you.

How many full brothers do you have? |__| If zero go to B26.

If more than one: I will now ask you questions about each full brother, beginning with the oldest.

If one: I am now going to ask you questions about your full brother.

QUES	STION	B20. Brother #1	B21. Brother #2	B22. Brother #3
a.	Do you have any information about your ?	Yes No If No, DK or Ref go to B21.	Yes No If No, DK or Ref go to B22.	Yes No If No, DK or Ref go to B23.
b.	What year was he born?	Year	Year	Year
c.	Is he still living?	Yes No	Yes No	Yes No
d.	<i>If no:</i> In what year did he die?	Year	Year	Year
e.	Did he ever have cancer?	Yes ☐No If No, DK or Ref go to B21.	☐Yes ☐No If No, DK or Ref go to B22.	☐Yes ☐No If No, DK or Ref go to B23.
f.	If yes: What type(s) of cancer did he have? Use end pages if more space needed	#1: #2: #2:	#1: #2: #2:	#1: #2:
g.	When was the cancer diagnosed?	#1:Age OR Year #2:Age OR Year	#1:Age OR Year #2:Age OR Year	#1:Age OR Year #2:Age OR Year

QUE	STION	B23. Brother #4	B24. Brother #5	B25. Brother #6
a.	Do you have any information about your ?	Yes No If No, DK or Ref go to B24.	Yes No If No, DK or Ref go to B25.	Yes No If No, DK or Ref go to B26.
b.	What year was he born?	Year	Year	Year
c.	Is he still living?	Yes No	Yes No	Yes No
d.	<i>If no:</i> In what year did he die?	Year	Year	Year
e.	Did he ever have cancer?	Yes No If No, DK or Ref go to B24.	Yes No If No, DK or Ref go to B25.	Yes No If No, DK or Ref go to B26.
f.	<i>If yes:</i> What type(s) of cancer did he have? <i>Use end</i> <i>pages if more</i> <i>space needed</i>	#1:	#1:	#1:
g.	When was the cancer diagnosed?	#1:Age OR Year #2:Age OR Year	#1:Age OR Year #2:Age OR Year	#1:Age OR Year #2:Age OR Year

Use end pages if subject has more than 6 biological brothers.

Lastly,	we	will	talk	about	biol	ogical	sons.
Lacity,			con c	aboat	2101	- gioai	00110.

If one:

How many biological sons do you have? |____ If zero go to Section C.

If more than one: I will now ask you questions about each biological son, beginning with the oldest.

I will now ask you questions about your biological son.

QUE	STION	B26. Son #1	B27. Son #2	B28. Son #3			
а.	Do you have any information about your ?	Yes No If No, DK or Ref go to B27.	Yes INo If No, DK or Ref go to B28.	Yes No If No, DK or Ref go to B29.			
b.	What year was he born?	Year	Year	Year			
c.	Is he still living?	Yes No	Yes No	Yes No			
d.	lf no:						
	In what year did he die?	Year	Year	Year			
e.	Did he ever have cancer?	☐Yes ☐No If No, DK or Ref go to B27.	Yes No If No, DK or Ref go to B28.	Yes No If No, DK or Ref go to B29.			
f.	lf yes:	#1:	#1:	#1:			
	What type(s) of cancer did he have?						
	Use end pages if more space needed						
		#2:	#2:	#2:			
g.	When was the cancer diagnosed?	#1:Age OR Year	#1:Age OR Year	#1:Age OR Year			
		#2:Age OR Year	#2:Age OR Year	#2:Age OR Year			

QUE	STION	B29. Son#4	B30. Son#5	B31. Son#6
a.	Do you have any information about your ?	Yes No If No, DK or Ref go to B30.	Yes No If No, DK or Ref go to B31.	Yes No If No, DK or Ref go to Section C.
b.	What year was he born?	Year	Year	Year
c.	Is he still living?	Yes No	Yes No	Yes No
d.	lf no:			
	In what year did he die?	Year	Year	Year
e.	Did he ever have cancer?	Yes No If No, DK or Ref go to B30.	Yes No If No, DK or Ref go to B31.	Yes No If No, DK or Ref go to Section C.
f.	lf yes:	#1:	#1:	#1:
	What type(s) of cancer did he have? Use end pages if more space needed			
		#2:	#2:	#2:
g.	When was the cancer diagnosed?	#1:Age OR Year	#1:Age OR Year	#1:Age OR Year
		#2:Age OR Year	#2:Age OR Year	#2:Age OR Year

Use end pages if subject has more than 6 biological sons.

SECTION C DIET

The next series of questions will ask about your diet 10 YEARS AGO. For each food, I will ask how often you ate it as well as how it was cooked. Some of the common methods of cooking we are looking at include: pan frying, deep fat frying, oven-broiling, baking, and grilling. Please consider all the times you ate the food including at home, at work, when visiting, in a restaurant, or as take-out.

I would like you to use this scale when answering how often you ate the food.

Provide prompt card.

C1.	Never Less 1 2-3 1 2 3-4 5-6 1 2+ Medium C1A2.															
		Never	Less than once per month	per mon	2-3 per mon	per	2 per week	per	per	1 per day	2+ per day	Medium Serving Size		C1A2. at was Jal serv size?	your ving	
a.	Ten years ago, how often did you eat hamburgers or cheeseburgers?											1 medium or 4 oz. patty	S	М	L	
	If 'never', go to C2.											specify:				
		1.	hamb they e Provi	ourgers ever <r ide pro</r 	or che netho ompt c	d>? ard. L	u ate irgers, Use ma not use	arker	2.	hamb portio <met Only mark</met 	ourgers on of th hod>? ask fo er to v	ago, when y s or cheese ne time wer	eburge e they s used ortion	ers,wha / d.Use (s)or		
b.	pan fried			ΠY				propo	rtion OR			%				
с.	grilled or barbecued			Γ	es [No					propo	rtion OR			%	
d.	oven-broiled			ΠY	es ,	No			proportion OR %							
e.	cooked another way			Πy	es [No					propo	rtion OR			%	
f.	<i>If cooked</i> <i>another way:</i> Can you describe how they were cooked?															
g.	Ten years ago, when you ate hamburgers or cheeseburgers, how well done were they usually cooked?		are ledium- ledium	-rare			⊡ w	edium- 'ell-dor ery wel				Ъск				
h.	Ten years ago, when you ate hamburgers or cheeseburgers, what proportion of the time were they marinated before being cooked?		lways About 7 About 5					bout 25 arely ever	5%		Ţ.	Ъск				
	AF	RITH	IME	TIC	CF	I EC	K C	ON] _{(G}	oal is	100%)				

C2.	C2. The next food is BEEF STEAKS Never Less 1 2-3 1 2 3-4 5-6 1 2+ Medium C2A2.																
			Less than once per month	per mon	2-3 per mon	per	per	3-4 per week	per	1 per day	2+ per day	Medium Serving Size	What was your usual serving size?				
a.	Ten years ago, how often did you eat beef steaks? <i>If 'never', go to C3.</i>											4 oz. specify:_	S	М	L		
			steaks Provid	s, were de pro	they e	en you ever <n ard. U ods no</n 	nethoo se ma	l>? rker	2.	steaks they < Only marke	s, what smetho ask fo er to w	go, when yo t portion of od>? r methods vrite propo (s) on prov	the tir used	ne wer . Use (s) or			
b.	pan fried			ΠY	es [No					propoi	rtion OR			%		
c.	grilled or barbecued						propoi	rtion OR			%						
d.	oven-broiled			Π _Y	es [No			proportion OR %								
e.	cooked another way				es [No			proportion OR %								
f.	<i>If cooked</i> <i>another way:</i> Can you describe how they were cooked?																
g.	Ten years ago, when you ate beef steaks, how well done were they usually cooked?		are edium- edium	rare			⊡w	edium ell-dor ery wel		D	К						
h.	 Ten years ago, when you ate beef steaks, what proportion of the time were they marinated before being cooked? About 75% About 75% About 50% 																
	AR	ITH	ME	TIC	СН	EC	KD	ON	E	(Goa	al is 1	100%)					

C3.	C3. The next food is PORK CHOPS															
			Less than once per month	per mon	per	1 per week	per	per	per	1 per day	2+ per day	Medium Serving Size		C3A2. at was ial serv size?	your	
a.	Ten years ago, how often did you eat pork chops? <i>If 'never', go to C4.</i>											2 chops specify:_	S	М	L	
			chops, P rovid	were t e pron	hey ev n pt ca	n you a er <me rd. Us s not u</me 	ethod> se mar	?		what po <meth Only a marke</meth 	ortion od>? sk for r to wi	o, when yo of the time <i>methods</i> rite propor s) on prom	were used. tion(s	Use Jor	וסףs,	
b.	pan fried						propo	rtion OR			%					
c.	grilled or barbecued						propo	rtion OR			%					
d.	oven-broiled				es [No					propo	rtion OR			%	
e.	baked or roasted				es [No			proportion OR %							
f.	cooked another way				es [No					propo	rtion OR			%	
g.	<i>If cooked another way:</i> Can you describe how they were cooked?															
h.	Ten years ago, when you ate pork chops, how well done were they usually cooked?															
i.	Ten years ago, when you ate pork chops, what proportion of the time were they marinated before being cooked?		ways ways bout 7	5%				oout 25 arely ever	5%			Ък				
	AR	ІТН	ME	ТІС	СН	EC	ΚD	ON	E 🗆	Goa	al is t	100%)				

C4.	C4. The next food is HAM. For these questions, do not include deli-ham or lunch meats.														
			Less than once per month	per mon	per	1 per week	per	per	per	1 per day	2+ per day	Medium Serving Size	Wha	C4A2. at was al serv size?	your
a.	Ten years ago, how often did you eat ham? <i>If 'never', go to C5.</i>											4 oz.	S	М	L
		i	t ever P rovid	<meth e pron</meth 	od>? npt ca	n you a rd. Us s not u	e mar		F	oortion Only a marke	of the sk for r to wi	specify:_ o, when yo time was i methods rite propor s) on pron	t <me used. tion(s</me 	thod>' Use ;) or	
b.	pan fried				es [No					propoi	rtion OR			%
c.	grilled or barbecued				es [No			proportion OR %						
d.	oven-broiled				es [No					propoi	rtion OR			%
e.	baked or roasted				es [No			proportion OR %						
f.	cooked another way				es [No					propoi	rtion OR			%
g.	<i>If cooked another way:</i> Can you describe how it was cooked?														
h.	Ten years ago, when you ate ham, how well done was it usually cooked?	u w	ist unti ell-dor ery wel	ie			Ъ								
	AR	ITH	ME	TIC	СН	EC	KD	ON	E 🗆	(Goa	al is 1	100%)			

C5.	C5. The next food is BACON															
			Less than once per month	per mon	per	1 per week	per	per	per	1 per day	2+ per day	Medium Serving Size	Wha	C5A2. What was your usual serving size?		
a.	Ten years ago, how often did you eat bacon? <i>If 'never', go to C6.</i>											2 strips specify:_	S	М	L	
			Ten ye was it e Provid cross o	ever <n< th=""><td>netho npt ca</td><td>d>? rd. Us</td><td>e mar</td><td></td><td></td><td>what po <meth Only a marke</meth </td><td>ortion od>? sk for r to wi</td><td>o, when yo of the time methods rite propor s) on pron</td><td>was il used. rtion(s</td><th>Use s) or</th><td>,</td></n<>	netho npt ca	d>? rd. Us	e mar			what po <meth Only a marke</meth 	ortion od>? sk for r to wi	o, when yo of the time methods rite propor s) on pron	was il used. rtion(s	Use s) or	,	
b.	pan fried				es [No			proportion OR %							
c.	oven-broiled				es [No			proportion OR %							
d.	cooked another way				es [No					propor	tion OR			%	
e.	<i>If cooked another way:</i> Can you describe how it was cooked?															
f.																
	AR	ITH	ME	TIC	СН	EC	KD	ON	Ε	(Goa	al is 1	100%)				

C6.	C6. The next food is BREAKFAST SAUSAGE. When answering these questions, DO NOT include other types of sausage such as Italian, Polish, or Bratwurst.														
		Never	Less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving Size	Wha	C6A2. at was Jal serv size?	your ving
a.	Ten years ago, how often did you eat breakfast sausage? <i>If 'never', go to C7</i>											2 links or 2 patties specify:_	S	М	L
		s F	Ten yea sausago Provide cross o	e, was e prom	it ever npt car	rd. Us	hod>? e marl			sausag <meth Only a marke</meth 	ge, what od>? ask for r to wa	go, when yo at portion o r methods rite propo (s) on pron	of the t used. rtion(s	time w . Use (s) or	vas it
b.	pan fried			Lγ	es 🖕	No					propor	rtion OR			%
C.	grilled or barbequed				es [No					propor	rtion OR			%
d.	oven-broiled			LΥε	es 🖕	No					propor	rtion OR			%
e.	cooked another way				es [No				(propor	rtion OR			%
f.	<i>If cooked another way:</i> Can you describe how it was cooked?														
g.															
	AR	ITH	ME	τις	СН	ECF	K D	ONI	Ξ 🗋	(Goa	nl is 1	100%)			

C7.	C7. The next food is CHICKEN or TURKEY. Although there are many ways to cook chicken or turkey, these next questions ask about FRIED CHICKEN or TURKEY, excluding stir-fried. We will ask about other ways of cooking chicken or turkey, including stir-frying, in the next section.															
		Never	Less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving Size		C7A2 at was ial ser size?	your ving	
a.	Ten years ago, how often did you eat fried chicken or turkey? <i>If 'never', go to C8.</i>											2 small or 1 large piece	S	М	L	
												specify:_				
	1. Ten years ago, when you ate fried chicken or turkey, was it ever 2. Ten years ago, when you ate fried chicken or turkey, what portion of the time was it <method>? Provide prompt card. Use marker to Only ask for methods used. Use</method>															
			Provide prompt card. Use marker to cross out methods not used.Only ask for methods used. Use marker to write proportion(s) or percentage(s) on prompt card.													
b.	deep fat fried or fast food			Γ	es [No					propoi	rtion OR			%	
c.	pan fried			Πy	es [No					propoi	rtion OR			%	
d.	fried another way			ΠY	es [No					propoi	rtion OR			%	
e.	If fried another															
	<i>way:</i> Can you describe how it was fried?															
f.	 Ten years ago, when you ate fried chicken or turkey, how well done was it usually cooked? Usually Usually Cooked? 															
	AF	RITH	IME	TIC	CH	IEC	KD	ON	E	Goa	al is t	100%)				

C8.	C8. That's all for fried chicken or turkey. Now we are going to talk about other ways of cooking CHICKEN or TURKEY. When you answer these questions, do not include FRIED CHICKEN or TURKEY.														
		Never	Less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving Size		C8A2. at was ial serv size?	your
a.	Ten years ago, how often did you eat chicken or turkey that was not fried? <i>If 'never', go to C9.</i>											2 small or 1 large piece	s	М	L
			Ten ye or turke Provid cross o	ey, wa	siteve n ptca	er ⁱ <me rd. Us</me 	thod> e mar	?	t t	urkey he tim Only a marke	that wa e was sk for r to wi	specify:_ o, when yo as not fried it <methods rite propole s) on prom</methods 	l, what d>? used. rtion(s	Use Use	
b.	baked or roasted				es [No					propo	rtion OR			%
C.	stewed				es [No					propo	rtion OR			%
d.	oven-broiled				es [No					propo	rtion OR			%
e.	grilled or barbecued				es [No					propo	rtion OR	L		%
f.	cooked another way				es [No					propo	rtion OR			%
g.	<i>If cooked another way:</i> Can you describe how it was cooked?														
	Ten years ago, when you ate chicken or turkey that was not fried, how well done was it usually cooked?		ust unti Zell-dor				Very	well-do	one	[Ъск				
	Ten years ago, when you ate chicken or turkey that was not fried, what proportion of the time was it marinated before being cooked?		Always About 7 About 5						5%			Ъск			
	AR	ITH	ME	TIC	СН	EC	KD	ON	E 🗆	Goa	al is 1	100%)			

C9.	C9. The next food is cooked FISH including cooked shell fish. For these questions, do not include raw fish such as sushi, or tuna and sardines eaten straight from the can.														
		Never	Less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving Size		C9A2 at was Jal ser size?	your ving
a.	Ten years ago, how often did you eat cooked fish? <i>If 'never', go to C10.</i>											2 pieces or 4 oz	S	М	L
		f	. Ten years ago, when you ate cooked fish, was it ever <method>? 2 Provide prompt card. Use marker to cross out methods not used. 2</method>						2. Ten years ago, when you ate cooked fish what portion of the time was it <method>? Only ask for methods used. Use marker to write proportion(s) or percentage(s) on prompt card.</method>						
b.	pan fried				es [No					propo	rtion OF	R		%
c.	deep fat fried or fast food				es [No					propo	rtion OF	R		%
d.	grilled or barbecued				es [No					propo	rtion OF	R		%
e.	oven-broiled			Y	es [No					propo	rtion OF	R		%
f.	baked or roasted				es [No					propo	rtion OF	R		%
g.	cooked another way				es [No					propo	rtion OF	R		%
h.	<i>If cooked another way:</i> Can you describe how it was cooked?														
	ARITHMETIC CHECK DONE Goal is 100%)														

C1	C10. The last food is GRAVY.														
		Never	Less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	1 per day	2+ per day	Medium Serving Size	Wh	C10A at was ual sei size?	s your rving
a.	Ten years ago, how often did you eat gravy? If 'never', go to											2 Tbsp	S	М	L
	Section D		Ten years ago, when you ate gravy, was it ever made from <i><method></method></i> ? <i>Provide prompt card. Use marker to</i> <i>cross out methods not used.</i>					2. Ten years ago, when you ate gravy, what portion of the time was it made from <method>? Only ask for methods used. Use marker to write proportion(s) or percentage(s) on prompt card.</method>							
b.	meat drippings				es [No					propo	rtion OR			%
c.	store bought cans or bottles				es [No					propo	rtion OR			%
d.	store bought packets				es [No					propo	rtion OR			%
e.	another way				es [No					propo	rtion OR			. %
f.	<i>If made another way:</i> Can you describe how it was made?												· · · · · ·		
	ARITHMETIC CHECK DONE Goal is 100%)														

SECTION D ALCOHOL

Thank you. You are doing great! We have now past the halfway point. This would be a good time to take a break if you need one.

Let subject decide if they need a break.

Now I am going to ask about your drinking of alcoholic beverages over your entire life.

D1. Have you had at least 12 drinks of alcoholic beverages over your entire life?
(One drink is one 12 oz bottle or can of beer OR one 4 oz glass of wine OR one shot of hard liquor)

If "No" or "Refused" go to Section E.

QUESTION		D2. BEER (one 12 oz bottle or can)	D3. WINE (one 4 oz glass) <i>Remind subject to</i> <i>exclude wine coolers</i> .	D4. HARD LIQUOR (one shot)		
a.	Has there ever been a period when you drank at least <i><insert i="" serving<=""> <i>size></i> ofper month for six months or longer?</insert></i>	Yes No If No, DK or Ref go to D3.	Yes No If No, DK or Ref go to D4.	If No, DK or Ref go to Section E.		
b.	How old were you when you first started drinking regularly, that is at least < <i>insert serving</i> <i>size</i> > per month?	Age OR Year	Age OR Year	Age OR Year		
c.	Do you still drinkregularly now?	Yes No	Yes No	Yes No		
d.	<i>If no:</i> When did you stop drinking regularly?	Age OR Year	Age OR Year	Age OR Year		

Questions for beer, wine and hard liquor continue on the next page...

QUESTION	D2. BEER (one 12 oz bottle or can)	D3. WINE (one 4 oz glass) Remind subject to exclude wine coolers.	D4. HARD LIQUOR (one shot)
e. During all the years you drank regularly, about how much did you usually drink per day, week, month, or year?	per day per week per month per year Mark which unit you're using: Bottles/cans:oz Millilitres Half-litres Litres Ounces Gills Half-pints Fifths Half-quarts Quarts Half-gallons Gallons Other (specify): 	per day per week per month per year Mark which unit you're using: Glasses:oz ml dl Millilitres Half-litres Half-litres Litres Ounces Gills Half-pints Pints Fifths Half-quarts Quarts Half-gallons Gallons Other (specify): 	<pre> per day per week per month per year Mark which unit you're using: Shots or mixed drinks Millilitres Half-litres Half-litres Half-litres Gunces Gills Half-pints Pints Fifths Half-quarts Quarts Half-gallons Gallons Other (specify):</pre>

Questions for beer, wine and hard liquor continue on the next page...

QUESTION		D2. BEER (one 12 oz bottle or can)	D3. WINE (one 4 oz glass) <i>Remind subject to</i> <i>exclude wine coolers.</i>	D4. HARD LIQUOR (one shot)
up drink	ere periods when you gave ing for at least 12 and then took it up again?	Yes No If No, DK or Ref go to D3.	Yes No If No, DK or Ref go to D4.	Yes No If No, DK or Ref go to Section D4h.
g. If yes	s:	#1:	#1:	#1:
	ord details about stop and times for each period.			
Use need	end pages if more space led.			
		#2:	#2:	#2:
hard liqu often? <i>Mark tw</i>	ur entire life, what type of uor did you drink most Yo types of liquor if			Brandy Bourbon Gin
subject	drank both equally.			Rum Scotch Tequila
				☐Vodka ☐Whiskey
				Other (specify):

SECTION E TOBACCO USE

Thank you. Now I am going to ask about your cigarette smoking over your entire life.

E1.	QUESTION	CIGARETTES
a.	Have you smoked at least 100 cigarettes in your entire life?	Yes No DK Ref
b.	Has there ever been a period when you smoked cigarettes regularly, that is at least once a week?	Yes No If No, DK or Ref go to Section F.
C.	How old were you when you first started smoking cigarettes regularly?	Age ORYear
d.	Do you still smoke cigarettes regularly now?	Yes No
e.	<i>If no:</i> When did you stop smoking cigarettes regularly?	Age ORYear
f.	During all the years you smoked cigarettes regularly, about how many did you smoke per day on average?	cigarettes per day
g.	Were there periods when you gave up smoking for at least 12 months and then took it up again?	Yes No If No, DK or Ref go to Section F.
h.	<i>If yes: Record details about stop and start times for each period. Use end pages if more space needed.</i>	#1:

SECTION F SUNLIGHT EXPOSURE

The next few questions are about your exposure to sunlight. This can be a hard thing for many people to remember. We all are in and out of sunlight all the time. We also change our lifestyle over the years, taking part in more or fewer outdoor activities, winter vacations, and so on. I am not asking you to give a detailed account of your sunlight exposure over your whole life. Rather, I am just looking for an estimate of your sunlight exposure, on average. So, with that in mind, let's get going.

0 0 0												
	F1. Between age <age group=""> OR Since age 60 about how many hours per week did you spend outdoors in the winter months, that is between October and March?</age>	<age group=""><age group="">ORORORSince age 60Since age 60t how manyabout how manyb per week didhours per week didyou spend outdoorsyou spend outdoorswinter months,in the summers betweenmonths, that is</age></age>		F3. Between age <age group=""> OR Since age 60 how often did you sunbathe? Was it Read categories to subject.</age>				F4. Between age <age group=""> OR Since age 60 when out in the sun, how much of the time did you use sun protection such as sunscreen, a wide-brimmed hat, or long sleeved shirt? Was it Read categories to subject.</age>				
			Ne	verOnpo	er on De Nu	er ov N ite ja	rthæble	næeLests	et Ibiænlefæd	ffth e /tübe	ettian&hr	ati st alway
a. 20 & 39	hrs/wk	hrs/wk										
b. 40 & 59	hrs/wk	hrs/wk										
c. 60 or older	hrs/wk	hrs/wk										

F5.	In how many of the past 10 years have you taken a holiday of at least one week in a region with a mostly hot and sunny climate?	years (0 to 10)					
F6.	Prior to < reference month> , had you ever lived continuously, for at least six months, in a region with a mostly hot and sunny climate?	n Yes 🗖 No					
F7.	Prior to < reference month >, what proportion of your working life was spent outdoors while you were doing your job?						
F8.	Prior to < reference month> , about how many times, in total, have you used a tannin bed, sunbed, or sunlamp?	ngtimes					
	bject is an albino, check 🖵 and go to see						
F9.	Which one of these colours best represents the colour of your skin on the inner, upper part of your arm?	Image: DescriptionImage: Descri					
	Provide prompt card.						
F10.	If your skin was exposed to strong sunlight for the first time in summer for one hour without sunscreen, would you	 Get a severe sunburn with blistering? Have a painful sunburn for a few days followed by peeling? Get mildly burnt followed by some degree of tanning? Go brown without sunburn? DK 					
F11.	After repeated and prolonged exposure to sunlight without sunscreen, would your skin become	 Very brown and deeply tanned? Moderately tanned? Only mildly tanned due to a tendency to peel? Only freckled or no suntan at all? DK 					
F12.	May I see the colour of your eyes?	□brown □green □gray □hazel □blue					
F13.	What was your natural hair colour when you were a teenager?	□black □light brown □red □dark brown □blonde/fair					

SECTION G HAIR PATTERN

Thank you. We just have two brief sections to go. First, I am going to ask about your hair pattern. Here are some pictures of the most common types of hair patterns. Each hair pattern has two views: the side and top.

Provide prompt card.

G1.	Which pair best represented your hair p	pattern at age:
a.	20	Pattern
b.	30	Pattern
C.	40	Pattern
d.	50 🔲 NA	Pattern
e.	60 I NA	Pattern
f.	70 I NA	Pattern
g.	80 I NA	Pattern

Sometimes things happen which change one's hair pattern, such as shaving your head, hair transplants, chemotherapy or radiation therapy.

G2.	When you were < AGE > years old, were	there any factors affecting your hair pattern?
a.	20	Yes No If yes: What were those factors?
b.	30	Yes No If yes: What were those factors?
c.	40	Yes No If yes: What were those factors?
d.	50 🖬 NA	Yes No If yes: What were those factors?
e.	60 🗳 NA	Yes No If yes: What were those factors?
f.	70 🗖NA	Yes No If yes: What were those factors?
g.	80 🗳 NA	Yes No If yes: What were those factors?

SECTION H GENERAL

We are almost done. The last questions are about your background. I am going to start by asking about your ethnic background and that of your parents. By ethnic background I mean your origin or ancestry. Here is a list of ethnic backgrounds.

Provide prompt card.

back	at do you consider to be ethnic kground? You can select more than one gory if you want.	H1. Your	H2. Your Biological Father's	H3. Your Biological Mother's
а.	European (Swedish, Norwegian, Danish, French, British, Italian, Spaniard, etc.)			
b.	Asian or Pacific Islander (Filipino, Indonesian, Japanese, Korean, Chinese, Indian, Pakistani, etc.)			
c.	African American or African Ancestry			
d.	Arab (Afghan, Iranian, Iraqi, Lebanese, Israeli, Syrian, etc.)			
e.	Aboriginal or Indigenous (North American Indian, Métis, Inuit/Eskimo)			
f.	Latin American (Mexican, Central and South American)			
g.	Oceanian (Australian, New Zealander, Melanesian, Micronesian, Polynesian)			
h.	Other, specify:			
i.	DK			
j.	Ref			

H4.	In what country were you born?	
H5.	<i>If not in Canada:</i> When did you immigrate to Canada?	Age ORYear
H6.	What language did you first learn to speak as a child?	
H7.	What language did your biological father first learn to speak as a child?	
H8.	Is your biological father fluent in another language?	Yes No
H9.	lf yes:	1
	What other languages is your biological father fluent in? Let's list them in order of fluency starting with the most fluent.	2 3
H10.	What language did your biological mother first learn to speak as a child?	
H11.	Is your biological mother fluent in another language?	Yes No
H12.	lf yes:	1
	What other languages is your biological mother fluent in? Let's list them in order of fluency starting with the most fluent.	

Now we are going to finish with some general questions that will allow us to group your answers with people like you.

H13.	What is your present marital status?	
		Married
		Living as married or common-law
		Widowed
		Divorced
		Separated
		Never married
		Шок
		Refused
H14.	Which one of these categories best represents your level of schooling?	Never attended school/kindergarten only
	Provide prompt card.	Up to grade 7
	· · · · · · · · · · · · · · · · · · ·	Completed grade 8
		Some highschool
		Completed highschool
		Vocational, technical or business training
		Some college
		Graduated from college
		Some university undergrad. courses
		Undergraduate degree
		Some university graduate courses
		Graduate degree
		Шок
		Ref

We are done! Thank you very much for taking the time to complete this interview. Your participation is sincerely appreciated.