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Wellington Blood & Cancer Centre, Capital, Coast and Hutt Valley

11 Riddiford Street

Newtown

Wellington 6021

Participant Information Sheet/Consent Form

Wellington Regional Hospital

Title	**Trial Title: FAST study: Feasibility ASessment of circulating Tumour DNA (ctDNA) in the diagnosis of advanced lung cancer in patients**
Short Title	FAST study
Protocol Number	1
Study Sponsor	University of Otago
Collaborating Centres	University of Auckland
Principal Investigator	*Dr Annie Wong*
Location	*Wellington Regional Hospital*

1. Introduction

You are invited to take part in a clinical research study that is testing a new approach of using additional blood tests in an attempt to hasten the diagnosis for patients with suspected advanced lung cancer. The study is called the *FAST study* and plans to invite 40-50 patients from Te Whatu Ora Capital, Coast and Hutt Valley as well as Te Whatu Ora Te Toka Tumai Auckland to participate. This study may be suitable for you because it has not been possible to safely get a biopsy for your cancer tissue to testing to make the best treatment plan.

In order to make a treatment plan for your lung cancer, tissue is needed to test for the presence of genes that can help grow or spread (i.e. oncogenes). These oncogenes are found in non-small cell

lung cancers in approximately 15% of Caucasians and approximately 50% in Asians. There is a higher chance of finding these genes such as *EGFR* mutations in Māori and Pasifika patients, with estimated age-standardised rates being 2 times and 3.4 times higher in Māori and Pasifika patients compared to Caucasians respectively.

Identifying the presence of these genes are important, as these genes can be targeted with oral medication that can reduce cancer growth and its spread. In New Zealand, there is publicly funded oral targeted treatment of *EGFR* mutations and *ALK* gene rearrangements. These treatments work in 70% of treated patients with these mutations and have the ability to extend the average survival in patients with advanced lung cancer from months to short years.

Please note, overall the chance of finding such an oncogene is low and we may not be able to find an oncogene that can guide your treatment. Your clinical situation may change and you may be too unwell to start the treatment by the time the result is available. Furthermore, the test may detect a lung cancer-related mutation for which there is no funded treatment or an extremely low chance of detecting an inherited mutation (<1% chance).

This Participant Information Sheet/Consent Form tells you about the screening phase of the FAST study. It explains the tests involved. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information sheet carefully. You should ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or your local doctor.

Participation in the study is voluntary. If you don't wish to take part, you don't have to. You will receive the best possible care whether or not you take part. If you decide to take part, you can withdraw from the study at any time.

If you decide you want to take part in the study and participate in screening, you will be asked to sign the Consent Form. By signing it you are telling us that you:

- Understand what you have read
- Consent to take part in the research study
- Consent to have the tests that are described
- Consent to the use of your personal and health information as described.

You will be given a copy of this Participant Information Sheet/Consent Form to keep. You may continue to ask any questions of the research team at any time.

2. What is the purpose of this study?

Most patients with lung cancer in New Zealand present with advanced disease. The diagnosis of lung cancer is dependent on a obtaining a biopsy of the cancer tissue. It is not possible to obtain a tissue diagnosis in 1 in 5 patients with suspected advanced lung cancer, due to the patient's poor state of health, challenging location of the tumour or insufficient tissue for testing.

The FAST study aims to improve the diagnostic process by providing a liquid biopsy (i.e. testing for lung cancer related genes present in your blood). If a genetic mutation from the cancer is detected, such as an *EGFR* or *ALK* mutation, this could potentially identify an effective, publicly funded treatment for your cancer. Please note that the chance of finding a suitable biomarker that can guide your treatment is low.

The approach being investigated in this study differs from the standard treatment offered in this hospital because we are offering an alternative way to diagnose oncogene-driven lung cancer, in patients who would otherwise miss out on this treatment option. We plan to enrol over 45 participants in New Zealand.

The results of the testing could potentially provide treatment options including:

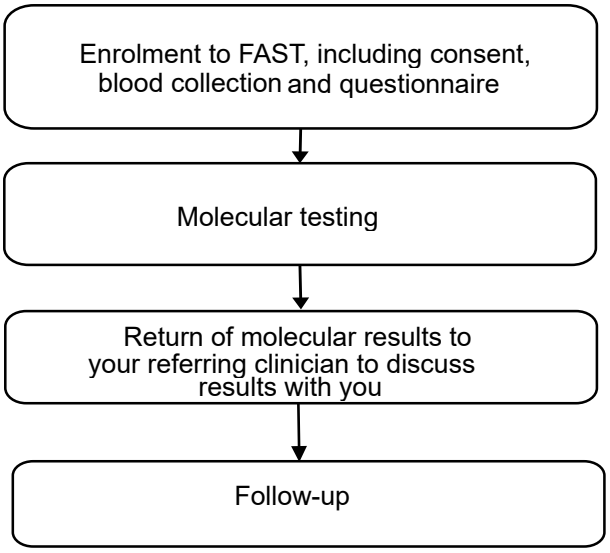
1. Publicly funded *EGFR* or *ALK* targeted oral treatment
2. Other treatments organised through your doctor/oncologist

There is a chance that even if we find a biomarker there may be no funded treatment, no specific treatment or clinical trial.

These treatments are experimental and not used or yet approved as a standard treatment for your cancer. Your doctor will discuss these options with you at the time the results of the screen are returned to you.

3. What does participation in this research involve?

The figure below shows some of the steps you would take in the study:



What will happen if I am involved?

Consent and screening: A member of the research team will explain the study and you will be asked to sign the Consent Form to consent to join the study and to be screened for changes in your DNA in your blood.

We will ask you to tell us about your own and family's health background.

We also ask for a 40 mL sample of blood to be collected. This may be collected at your local hospital and will be sent to Auckland for processing.

We will speak with your doctors to collect information from your medical records. Staff from the research team may review your data to review your eligibility for screening.

Your medical files may be reviewed at the hospital (or study doctor's office) or remotely (outside of the study centre) if the relevant study personnel are unable to visit the hospital in person, in order to check the information and verify the clinical study procedures, without breaking your confidentiality. If a copy of your medical files are provided for remote review, these records will include your study participant number but will not include your name or other directly identifiable information. However, if direct access to these records is made available through the study centre's secure electronic medical records portal, your identifiable information will be visible as they would be as if being reviewed at the study centre (this access will be password-protected and read-only

so that the reviewer won't be able to delete, modify or download the information from the secure electronic medical records portal).

This first visit may take up to 2 hours of your time either in person, over the phone or via a webbased study. Access to your tumour tissue and medical records will not require any time from you.

Molecular testing: If you decide to take part in the study we will use a small part of your blood to look for an oncogene by doing a laboratory analysis (molecular testing). Researchers will take your blood and test this by 3 different methods: droplet digital polymerase chain reaction (ddPCR), next generation sequencing (NGS) and comprehensive genomic profiling (CGP). Tumour analysis may be done in New Zealand at University of Auckland or sent to the overseas laboratory at: Guardant Health, 505 Penobscot Drive, Redwood City, California 94063, USA

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We acknowledge that cultural concerns may arise when tissue samples are sent overseas, including how samples are stored and disposed of. For some Māori, human tissue contains genetic material that is considered to be collectively owned by whānau, hāpu and iwi. We also acknowledge that some Māori consider health information taonga and therefore the sending of data overseas requires careful consideration. Before deciding to take part in this study you may want to discuss with whānau and friends. Should you have any concerns regarding appropriate practice/tikanga to address cultural issues please contact Dr Annie Wong (contact details at end of form). We respect the importance of these values and beliefs so please inform the study site if you wish to have whānau support present or would like a karakia performed when donating any biological samples for this study. Due to your samples being sent to countries outside of New Zealand, a karakia will not be able to be performed at the time of your sample disposal.

Questionnaires: During your participation in the study, we will ask you to complete a baseline questionnaires about your experience in your diagnostic pathway thus far and your preferences for blood based molecular testing. The questionnaire will take up to ten minutes to complete.

Interviews: You may be one of up to 50 patients who will be invited to do an interview to discuss their experience in the diagnostic pathway for their lung cancer and how they feel about molecular testing. There is no obligation to participate. If you are asked to participate and agree, this will be done after you agree to be part of the screening.

Interviews may be face to face, over the telephone or via a web-based study and will take around 30 minutes each. These interviews will be conducted by research staff from the University of Auckland.

Return of results: We will return the results of the screening to your referring oncologist and who will arrange to see you to discuss these results. The information we will provide is whether we have found a biomarker that can guide your treatment or not. This information will be reported back to your treating clinician. They will then liaise with you or your whanau (if you agree) regarding the results. They will decide in conjunction with you the appropriate treatment options for your clinical situation depending on your state of health at that time. This may include the use of oral targeted therapies if a relevant oncogene is detected and supportive cares as needed.

Follow-up: Research staff will contact your doctor at 3 months after enrolment for a clinician survey and check on your progress.

Study costs:
You will not be reimbursed for the participation in the study but a koha of $50.00 will be provided to assist with covering travel costs.

4. Do I have to take part in this research study?

Taking part in any study is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the study at any stage.

Your decision on whether or not to take part, or to take part and then withdraw, will not affect your routine treatment, your relationship with those treating you or your relationship with Wellington Regional Hospital.

5. What are the alternatives to taking part?

If you do not take part in the study, there may be other options available. Your referring doctor will discuss these options with you before you decide whether or not to take part in this study. You can also discuss the options with your local doctor.

6. What are the possible benefits of taking part?

We cannot guarantee that you will receive any benefits from this study. Possible benefits may include you being eligible for a treatment based on the finding of an oncogene or better treatment of people with cancer in the future. Chances of finding a biomarker that can guide treatment are low. There is also a chance that we may not find a treatment if we identify an oncogene.

7. What are the possible risks and disadvantages of taking part?

We do not know if we will find an oncogene that will lead to a new treatment option for you or not.

There is a small chance that we will find that your cancer could be caused by an inherited genetic change. Other members of your family may also have the same genetic change. This gene alteration could be passed on to the next generation. It is important to understand that this result may only show that there is an increased risk in your family of developing cancer.

In the consent form we will ask you to indicate if you wish to be informed about changes in your genes that could cause cancer and may run in your family. In the future we may ask you to confirm your decision. You can change your mind at any time. If you have a cancer gene alteration and you have indicated that you wish to be informed, we will let you know that we have found a genetic change and invite you to visit a genetic counsellor. The genetics specialist will help you to think about what this might mean for you and your family, describe any processes for confirmatory genetic testing and discuss the screening and risk management options that may be available and support you as you learn about the gene variant. If you are worried about a family history of cancer, you can discuss this with your study doctor and they may refer you to a genetic counsellor before your results are available. Learning about this result might affect you and your family emotionally.

If you do obtain the results of your genetic tests, you may then be obliged to disclose this on any future application for insurance or employment should it be requested. Genetic information actually acquired by you as a result of your participation in this research may have implications for your (or your relatives') ability to obtain cover for certain risk rated insurance products offered either alone or as part of a superannuation product (e.g. insurance products cover for: life, disability (income protection), trauma, or any business or bank loans which require a policy for life, disability or trauma) and may impact upon the amount you pay for and scope of protection provided by such products.

Your coded information is being sent overseas for the Guardant360 test. Other countries may have lower levels of data protection than New Zealand. There may be no New Zealand representation on overseas organisations which make decisions about the use of your information. There is a risk

that overseas researchers may work with information in a way that is not culturally appropriate for New Zealanders.

8. What will happen to my test samples?

Required research:

The molecular screening of your tumour sample will be performed in a New Zealand laboratory at University of Auckland or sent overseas to Guardant360, Palo Alto, USA.

Sample Identification and Storage: Staff will remove personal identifiers, such as your name and address, and replace them with a unique code. This unique code will enable us to link the information from different datasets, for example, your medical records, to your samples. Your tissue and other samples, the data derived from any analyses of those samples and your personal information found in your health records will be coded to protect your confidentiality.

Your tissue and/or blood samples will not be sold by the collaborating centre. You will not benefit financially if this research leads to development of a new treatment or medical test.

9. What if new information arises during this study?

During the course of the study, information on new biomarkers that can guide your treatment may become available. If this happens, the research team will tell you about the new biomarker and discuss with you whether you want your samples to be tested for this biomarker. This will be entirely up to you to decide. The screening process for any new biomarker will follow what is described in this Participant Information Sheet/Consent Form.

10. What if I withdraw from this study?

If you decide to withdraw from the study, please notify your study doctor.

If you decide not to receive your screening results, you can choose to be contacted for follow-up to allow the collection of personal information regarding your health. If you do not wish to be contacted for follow-up, a member of the research team will ask for your permission to collect information on your health from your medical records to look at the long-term effects of your participation on this study.

If you wish to completely withdraw from this study, you will not be contacted again and no information will be collected about your health from then on.

If you withdraw your consent for the collection of any future personal information, information already collected will be retained in compliance with the law. You should be aware that data collected up to the time you withdraw consent will form part of the study results.

11. Could this study be stopped unexpectedly?

This study may be stopped unexpectedly for a variety of reasons, including decisions made by local health authorities, the funding body or the study sponsor.

12. What happens when the study ends?

Your referring clinician will inform you about your own results where relevant and will inform you of the results of the study after it has been analysed and reported.

13. What other information will be collected?

We would like to collect information about your ongoing health status from your health records. Information about you may be obtained from your health records held at this and other health services for the purpose of this study. By signing the Consent Form you agree to the site staff at Wellington or Auckland Hospital accessing health records if they are relevant to your participation in this study.

Although efforts will be made to protect your privacy, absolute confidentiality of your information cannot be guaranteed. Even with coded and anonymised information, there is no guarantee that you cannot be identified. The risk of people accessing and misusing your information (e.g. making it harder for you to get or keep a job or health insurance) is currently very small, but may increase in the future as people find new ways of tracing information.

14. What will happen to information about me?

By signing the Consent Form you consent to the research team collecting and using personal information about you for the study. Your study data will be held by the University of Otago. Interviews, if applicable, will be conducted by researchers from the University of Auckland. This information will be held securely and confidentially.

The information collected in the databases of this study will be identified by a code number. Specifically, we will keep your personal details separate from your coded data through computers dedicated to this project and use stringent security measures to prevent unauthorised use, including: strict access controls, computer security and data encryption techniques, confidentiality agreements and staff training. Only the site staff at Wellington Regional Hospital or Auckland City Hospital will be able to link the code number to you personally. Use of data from this study will not identify you as all data will be coded.

Information about your participation in this study will be recorded in your health records.

Your health records and any information obtained during the study are subject to inspection (for the purpose of verifying the procedures and the data)

The following groups may have access to your coded information which may be sent and stored overseas:

- The sponsor, for the purposes of this study.
- People and companies working with or for the sponsor, for the purposes of this study ▪ Regulatory or other governmental agencies worldwide.

By signing the Consent Form, you authorise release of, or access to, this confidential information to the relevant study personnel and regulatory authorities as noted above.
It is anticipated that the results of this study will be published and/or presented at professional meetings. In any publication and/or presentation, information will be provided in such a way that you cannot be identified.

You have the right to request access to your information collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please contact the research team member named at the end of this form if you would like to access your information.

All the data will be kept for at least 15 years from the end of the study.

15. Complaints and compensation

If you suffer any injuries or complications as a result of this study, you should contact your study doctor as soon as possible. If you were injured in this study, you would be eligible to apply for compensation from ACC just as you would be if you were injured in an accident at work or at home. This does not mean that your claim will automatically be accepted. You will have to lodge a claim with ACC, which may take some time to assess. If your claim is accepted, you will receive funding to assist in your recovery.

If you have private health or life insurance, you may wish to check with your insurer that taking part in this study won't affect your cover.

16. Who is organising the study?

This is an investigator-initiated study led by a team of doctors and medical specialists (including oncologists and nurses), scientists (with expertise in cancer biology, genetics and bioinformatics) and clinical trial researchers.

The University of Otago is the sponsor of the study.

No member of the research team will receive a personal financial benefit from your involvement in this study (other than their ordinary wages).

17. Who has reviewed the study?

This study has been reviewed and approved by the HDEC xxx

18. Further information and who to contact

The person you may need to contact will depend on the nature of your query.

If you want any further information concerning this study or if you have any medical problems which may be related to your involvement in the study (for example, any side effects), you can contact the principal study doctor on annie.wong@ccdhb.org.na, or any of the following people:

Clinical contact person

Name	TBA
Position	Project Coordinator
Telephone	TBA
Email	TBA

If you want to talk to someone who isn't involved with the study, you can contact an independent health and disability advocate on:

Email: advocacy@advocacy.org.nz
Website: https://www.advocacy.org.nz/

If you require Māori cultural support contact the administrator for He Kamaka Waiora (Māori Health Team) by telephoning 09 307 4949 ext 29200. State title of the study and name of primary investigator.

You can also contact the health and disability ethics committee (HDEC) that approved this study on:

Email: hdecs@health.govt.nz
Phone: 0800 400 569 (Ministry of Health general enquiries)

Thank you for reading about this study.

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Wellington 6021

Wellington Blood & Cancer Service
Wellington Regional Hospital

Consent Form

Title	**Trial Title: FAST study: Feasibility ASessment of circulating Tumour DNA (ctDNA) in the diagnosis of advanced lung cancer in patients**
Short Title	*The FAST study*
Protocol Number	
Study Sponsor	*University of Otago*
Principal Investigator	*Dr Annie Wong*
Location	*Wellington Regional Hospital / Auckland Hospital*

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the study described in this Participant Information Sheet.

I freely agree to take part in this study as described and understand that I am free to withdraw at any time during the study without affecting my future health care.

I understand that my GP or current provider will be informed about my participation in the study.

I give permission for my doctors, other health professionals, hospitals or laboratories outside this hospital to release information to Wellington Regional Hospital concerning my disease and

treatment for the purposes of this study. I understand that such information will remain confidential.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I understand that, if I decide to discontinue the participation, I may be asked to attend follow-up visits to allow collection of information regarding my health. Alternatively, a member of the research team may request my permission to obtain access to my medical records for collection of follow-up information for the purposes of research and analysis.

I consent to the storage and use of my DNA as described in the relevant section of the Participant Information Sheet, for:
• This specific study

I understand that I will be given a signed copy of this document to keep.

I wish to be informed if I am found to have a gene alteration that causes cancer:

YES ☐ NO ☐

If research with my DNA reveals some other medical condition relating to me or my family for which treatment is available or pending:

	Yes	No
a. I wish to be informed	☐	☐
b. I wish for affected family members to be informed and I give my consent for the researcher to approach my relatives on my behalf	☐	☐

Name of Participant (please print) _____

Signature _____ Date _____

Declaration by Study Doctor/Senior Researcher/Delegate†

I have given a verbal explanation of the study, its procedures and risks and I believe that the participant has understood that explanation.

Name of Study Doctor/Senior Researcher† (please print) _____

Signature _____ Date

† A senior member of the research team or delegate must provide the explanation of and information concerning the research study.

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Declaration by Interpreter (only if required)

I am a qualified interpreter. I have given a verbal explanation of the research study, its procedures and risks and I believe that the patient has understood that explanation. I believe that informed consent was freely given by the participant.

Name of Interpreter (please print) _____

Signature _____ Date _____

Note: All parties signing the consent section must date their own signature

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