FAQs for UK Pathology Departments
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If you would like to discuss any of the listed FAQs further, or have any other questions regarding the Oncotype DX® Breast Cancer Assay, please don’t hesitate to contact our Customer Support team on 020 3031 8087 or at europeansupport@genomichealth.com

Q: How much tumour tissue is required for the Oncotype DX® Assay for invasive breast cancer?
A: For optimal processing of the Oncotype DX Breast Cancer Assay, the submitted tumour block should contain the largest cross section of invasive carcinoma (with a minimum of 2 mm). Should the block not meet pathology criteria, the Genomic Health® laboratory will not be able to proceed with testing and may request that another block is submitted.

Q: Can core biopsy material be sent?
A: Yes, if this meets the pathology criteria as described above and in our pathology guidelines.

Q: Does it matter what type of fixative has been used to fix the tumour tissue?
A: Genomic Health will attempt to process a tumour block independent of the type of fixative used by the submitting hospital, however, the preferred fixative is that of 10% neutral buffered formalin. The use of other fixatives may increase the chance of an RT-PCR failure.

Q: Can the test be performed on male breast cancer?
A: Yes

1 Boolbol, et al, Cancer Res 2011;71(24 Suppl);Abstract PS-14-03

Q: Can you test tumour tissue in a lymph node? If not, why not?
A: No.

The Oncotype DX® Breast Cancer Assay was clinically validated using tumour tissue from primary breast tumours. We have data which shows modest correlation and agreement in continuous gene expression between the primary tumour and metastatic lymph node; however, quantitative differences were observed1.

As clinical outcome data is only available for Recurrence Score® results generated from the primary tumour, only specimens from the primary tumour mass will be accepted for testing.

1 Boolbol, et al, Cancer Res 2011;71(24 Suppl);Abstract PS-14-03
Q: How does tumour heterogeneity affect the result and how can this be considered when selecting an appropriate tumour block for testing?

A: The Oncotype DX® Breast Cancer Assay assesses the biological features of the tumour by looking at the interactions and expressions of 16 breast cancer-related genes and 5 reference genes. Heterogeneity studies have been conducted and demonstrated consistency in Recurrence Score® value despite sampling different regions of the same tumour block¹. While not common, to mitigate concerns regarding tumour heterogeneity, we encourage sending a specimen which contains the largest cross section of the highest grade disease as the most representative sample of the patient’s disease.

¹ Baehner et al, Heterogeneity of quantitative RT-PCR measurement of estrogen and progesterone receptor expression: Comparison of tissue microarray cores to whole sections of paraffin embedded breast cancer tissue. Annual Meeting of USCAP, 2008, Abstract 50

Q: What do I do if there are 2 primary cancers or a multifocal tumour with foci with non-identical morphology?

A: In all cases, we recommend on testing the most aggressive focus first. The following options are available:
   a) Test the higher grade, more aggressive tumour only.
   b) Test the second focus after the testing for the first focus is completed. Testing sequentially in this way will only incur a fee for one test. Please note that if the Recurrence Score® result of the first focus/primary tumour is high and the decision is to recommend chemotherapy, we would not expect to test the second focus/primary tumour.
   c) Test both tumours at the same time. Please note that in this case each Recurrence Score result produced will incur a fee.

Q: What do I do if there is a mixed type invasive breast cancer?

A: Please call our Customer Support line on 020 3031 8087 or email your query to europeansupport@genomichealth.com and one of our pathologists will be pleased to advise you.
Q: What does the ER/PR and HER2 quantitative score actually mean and what do we do if any of these differ from the score by IHC?

A: A quantitative ER score provides further insight into adjuvant treatment decisions by helping to determine the magnitude of tamoxifen benefit for an individual patient (the higher the ER score, the greater the likelihood of tamoxifen benefit). Individual ER scores have been shown to be predictive of a patient’s benefit from hormonal adjuvant therapy. Individual PR scores have found to be prognostic; generally speaking, patients with PR(+) tumours have better outcomes than patients with PR(–) tumours.

ER assessment by qPCR and IHC has a 93% to 96% concordance. PR assessment by qPCR and IHC has a 90%2 concordance.

Current ASCO®/CAP guidelines recommend anti-endocrine therapy for breast cancers considered ≥1% positive4 for ER expression by IHC.

In a HER2 negative population, HER2 assessment between qPCR and IHC has a 95%5 concordance and 97%6 concordant between qPCR and FISH.

In a HER2 positive population, HER2 assessment between qPCR and FISH is 90%7.

Current ASCO/CAP guidelines recommend HER2-targeted therapy for breast cancers considered positive for HER2 protein overexpression by IHC or HER2 gene amplification by ISH8.


Q: What is the failure rate of the Oncotype DX® test for invasive breast cancer? What is usually the reason for a failed test?

A: With resubmission, we have a >97% overall success rate in producing a Recurrence Score® value1. Our failure rate is <3% and is most often due to insufficient residual invasive carcinoma on our deeper H&E sections taken from the submitted specimen.

To mitigate this, we recommend the submitting pathologist review their deepest H&E sections of a case and send us the largest cross section of highest grade disease available for the patient. Generally surgical excisions are preferred however, in cases of small tumours, the initial core biopsy may have more invasive carcinoma.

1Anderson et al, San Antonio Breast Cancer Symposium, 2009, Abstract 6021

Q: What happens if the test fails?

A: Customer Service will contact the hospital and the doctor to advise that we were unable to report on the sample submitted and inquire if another sample is available if resubmission is appropriate. If there is additional specimen, we will contact the hospital. [Please note that Genomic Health does not charge for failed tests.]
Q: How does Genomic Health ensure that the RNA which is extracted for testing is from tumour tissue only, and not normal breast tissue/DCIS that may also be present in the tissue block?

A: Once the specimen arrives for testing, a board certified Genomic Health® pathologist reviews the sample and identifies the invasive lesion. The slide is marked to exclude metabolically active components in the sample, such as biopsy cavities, and to enrich for tumour, if needed. RNA is extracted from the breast cancer tumour specimen and purified. Next, the RNA is analysed using quantitative RT-PCR. Finally, the Recurrence Score® result is calculated from the gene expression results. The technique is a highly precise and very reproducible method of measuring the quantity of messenger RNA [mRNA] to determine gene expression1.

1 Cronin et al, Clinical Chemistry, 2007;53: 1084–91

Q: What quality assurance measures are in place in the laboratory at Genomic Health for the Oncotype DX® breast cancer assay?

A: At Genomic Health, we developed and follow a highly specialised process that not only adheres rigorously to CAP (College of American Pathologists) standards and CLIA (Clinical Laboratory Improvement Amendments) regulations, but also incorporates numerous real-time quality checks and periodic proficiency testing designed to produce a high level of accuracy in information that we deliver to physicians and patients. All received specimens and their associated paperwork undergo a thorough review and each specimen receives a unique barcode generated by our laboratory information management system to ensure robust traceability throughout the entire testing process. Additional measures include, but are not limited to, use of standardised operating procedures in all phases of specimen management and testing, sample review by a board-certified pathologist, and regular biostatistical review of all samples and controls. All genes are tested in triplicate and normalised using reference genes.

Q: What Licences and Accreditations does Genomic Health have?

A: Genomic Health holds a CLIA Certificate of Accreditation from the Centers for Medicare & Medicaid Services (CMS) and is enrolled in the College of American Pathologists (CAP) Accreditation Program. Links to these licenses can be found at http://www.genomichealth.com/en-US/GlobalPages/Licenses.aspx

Genomic Health also holds clinical laboratory licences from California and other states as required by law. Please contact Genomic Health Customer Service for copies of these licences. The state licenses are also posted on http://www.genomichealth.com/en-US/GlobalPages/Licenses.aspx#.U45OMXjOXvU
Logistical information

Once FedEx® has collected the Oncotype DX® Breast Cancer Assay kit containing the tumour specimen, along with the Requisition Form and the patient’s Histopathology Report, it usually takes 24–48 hours to reach the Genomic Health® laboratory.

You can track its progress by using the FedEx Tracking Number (the 12 numbers in groups of 4 found in the bottom right corner of the FedEx International Air Waybill, and on the stickers down the left hand side of the Air Waybill). Once testing is complete, any unused tissue from the patient’s tissue block is returned to the submitting laboratory.

www.oncotypedx.com

Customer Service

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