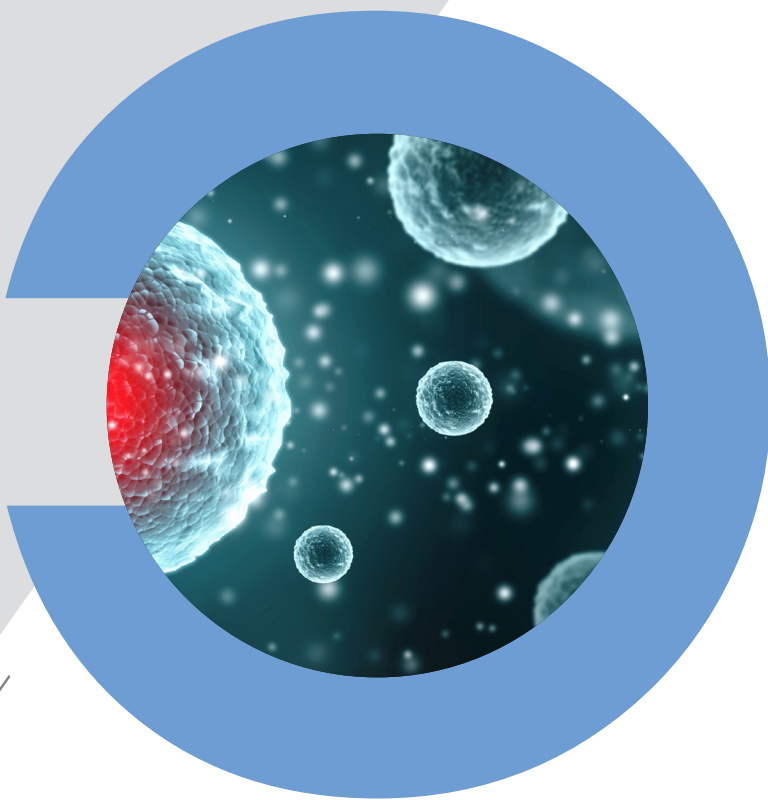# chemo-scale™

Minimal-invasive in-vitro chemosensitivity testing

Nordic Laboratories®

About chemo-scale™

Cancer is an extremely heterogenous disease. Chemotherapies do not respond in the same way in every patient. chemo-scale™ uses a blood sample to examine the effectiveness of chemotherapies on an individual patient. The probability of successful therapy can be significantly increased and treatment failure can largely be avoided. However, conventional 'Standard of Care' approach does not take into consideration the overall architecture of a particular patient's tumour. It is important that the characteristics of the tumour are studied comprehensively before deciding the treatment plan, should be personalised to individual patients and their disease.

DCG has proven the clinical relevance of chemo-scale™ with trials comprising more than 5.000 patients.

chemo-scale™ is an analysis of tumour cells to provide drug efficacy and resistance guidance for chemotherapy.

With chemo-scale™ analysis, we minimise the risks of therapy failure for the patient - saving money, reducing 'trail and error' and most importantly, intensifying the attack on the patient's cancer, not the patient.

- chemo-scale™ directly tests the effect of chemotherapy / anti-cancer drugs on the patient's tumour cells. It helps to customise the treatment plan according to sensitivity and resistance patterns of tumour cells.
- With this information, the physician and the patient can choose the most effective chemotherapy from the available options.
- chemo-scale™ is perfomed on cells taken from a fresh biopsy sample of the tumour or circulating tumour associated cells (C-ETACs) isolated from peripheral blood. A control analysis is included.
- Analysing the chemosensitivity pattern of circulating tumour associated cells and tumour tissue derived cells of the same patient, we observed a concordance of 93.7%.

chemo-scale™ is particularly recommended for cancer patients ...

... who are newly diagnosed with a solid tumour such as stomach, pancreas, breast etc.

... where cancer has relapsed

chemo-scale™

chemo-scale™ Analysis Unravels

- **It reveals cytotoxic chemotherapy drug efficacy.**
- **It also reveals hierarchy of these drug choices.**
- **Analysis is carried out for single drugs and additional drug combinations on request.**
- **chemo-scale™ is unique in its methodology and has extensive clinical evidence.**

FAQ's

What is chemo-scale™?
chemo-scale™ is a powerful analysis performed on live tumour cells. It reveals which drugs or combinations will kill the cancer of an individual patient more effectively.

How can chemo-scale™ help?
Not all drugs work the same on all patients. Some drugs may not prove benefical for the patient and waste valuable time and resources at a critical point in treatment. With chemo-scale™ there is a way to know how effective the chemotherapy will be, before starting the treatment. In clinical trails, comparing the efficacy of chemoresistency profile with the radiological response focussing on disease progression, we found a concordance of 87.0%.

How is chemo-scale™ different from other pre-treatment cancer tests?
- Commonly available molecular tests provide information mainly about targeted therapy drugs, but cytotoxic chemotherapy is the most common first therapy.
- chemo-scale™ evaluates the actual response of cancer cells to cytotoxic chemotherapy drugs.
- The key difference between other tests and chemo-scale™ is, we use a different approach to identify the relevant cells in a short-term culture, thus enabling accurate advise.
- It is clinically validated with more than 5.000 patients.

Sample requirement:
15–20 ml blood in EDTA tubes

Turn Around Time (TAT):
8 - 10 days from receipt of the sample

Relevant publications

- *Akolkar, D.B., Crook, T., Page, R. et al. Liquid Biopsies to Enable Non-Invasive Real-Time Functional Chemoresistance Profiling in Solid Organ Cancers. Journal of Clinical Oncology 05/2020. 38(15_suppl). p.3525. DOI: 10.1200/JCO.2020.38.15_suppl.3525.*

- *Limaye, S., Crook, T., Page, R., Patil, D. et al. Effect of Previous Chemotherapy Treatments on Circulating Tumor-Associated Cells in Colorectal Cancer Journal of Clinical Oncology 02/2020. 38(4_suppl). p.194. DOI: 10.1200/JCO.2020.38.4_suppl.194*

- *Akolkar, D.B., Patil, S., Mhase, V. et al. In Vitro Chemo Resistance Profiles of Circulating Glial Cells Replicate Chemo Characteristics of Tumor Tissue. Neuro Oncology 11/2019. 21(6_suppl). p.vi135. DOI: 10.1093/neuonc/noz175.567*

- *Akolkar, D.B., Patil, D., Crook, T. et al. Circulating Tumor Associated Cells in Head and Neck Cancers are Resistance Educated per Previous Chemotherapy Treatments. International Journal of Radiation Oncology 04/2020. 106(5). p.1121. DOI: 10.1016/j.ijrobp.2019.11.375*

- *Crook, T., Akolkar, D.B., Patil, S. et al. Abstracts P6-10-11: In Vitro Chemo Interrogation of Viable Circulating Tumor Associated Cells from Breast Cancer Patients. AACR Cancer Research 02/2020. DOI: 10.1158/1538-7445.SABCS19-P6-10-11*

- *Akolkar, D.B., Limaye, S., Patil, D. et al. Circulating Tumor-Associated Cells in Lung Cancers are Resistance-Educated per Previous Chemotherapy Treatments. Journal of Thoracic Oncology 01/2020. 15(2_suppl). p.37. DOI: 10.1016/j.jtho.2019.12.100*

- *Crook, T., Gaya, A., Page, R. et al. Clinical utility of circulating tumor-associated cells to predict and monitor chemo-response in solid tumors. Cancer Chemother Pharmacol 11/2020. DOI: 10.1007/s00280-020-04189-8*

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