

STANDARD RESPONSE LETTER

THINK TEST TREAT – an INCYTE initiative to raise awareness of the importance of *BCR-ABL1* monitoring and mutation testing among treating physicians and lab scientists

Tyrosine kinase inhibitors (TKIs) are the standard-of-care for patients with Philadelphia chromosome-positive (Ph+) leukaemias. However, some patients do not respond (known as primary resistance) or lose response (known as secondary resistance) to the TKI they are being treated with (Baccarani, et al. *Blood* 2013). Regular monitoring of *BCR-ABL1* transcript levels in response to TKIs is crucial in order to detect the emergence of resistance (Branford, et al. *Hematology* 2012). In approximately 50% of cases, resistance to TKI therapy is attributed to mutations in the *BCR-ABL1* gene (Baccarani, et al. *Blood* 2013). Despite this, barriers still exist for optimal monitoring and mutation testing across Europe.

The Think Test Treat (TTT) programme was initiated by INCYTE at the start of 2017 to identify and address some of these barriers in collaboration with a Steering Committee of 11 European experts in the field of *BCR-ABL1* monitoring and mutation testing. The overarching objective of the programme was to raise awareness of the importance of monitoring and more sensitive mutation testing methods for chronic myeloid leukaemia (CML) and Ph+ acute lymphoblastic leukaemia (Ph+ ALL) in order to (1) identify patients at risk of not achieving or losing a given response prior to the emergence of clinical symptoms, (2) detect mutations driving or associated with resistance to TKIs, thereby informing clinical decision making.

Three face-to-face meetings of the Steering Committee have taken place so far to discuss important issues. As a result of these meetings, a range of educational resources for treating physicians and lab scientists has been developed in collaboration with the Steering Committee. The materials will be available for reference or to download via a website that is currently under development (www.thinktesttreat.com). Resources include:

- A go-to, interactive core slide deck focusing on the importance of monitoring and mutation testing in both CML and Ph+ ALL
- A brochure that serves as a useful guide to *BCR-ABL1* monitoring and mutation testing with a supporting checklist for physicians
- A glossary defining key terms associated with *BCR-ABL1* monitoring and mutation testing in CML and Ph+ ALL
- A 'frequently asked questions' document on the topic of low-level *BCR-ABL1* mutations

Moving forward, INCYTE will continue to develop materials and to initiate activities under the TTT programme to support and improve *BCR-ABL1* monitoring and mutation testing for diagnostic labs, physicians and their Ph+ leukaemia patients.