

Case ID	102220373700
Patient Name	ARUN DAS
Age/Sex	29 Year /Male
Hospital Location	Noida, Uttar Pradesh, India
Hospital Name	JITM Skills Private Limited, Noida
Physician Name	Dr. Self
Date & Time of Accessioning	19/12/2022 19:00 Hrs
Date & Time of Reporting	22/12/2022 15:13 Hrs



### TEST NAME

BCR-ABL1 Kinase Domain Mutations

### SPECIMEN INFORMATION

Peripheral Blood Collected on 19/12/2022 at 09:30 Hrs

### CLINICAL HISTORY

NOT PROVIDED

### METHODOLOGY

Polymerase Chain Reaction

#### MOLECULAR TEST

**BCR-ABL1 Kinase Domain Mutations**

#### RESULT

Negative

### INTERPRETATION

No mutation has been detected in the specimen. The result must be correlated carefully with clinical findings. The presence of a kinase domain mutation is critical in treatment plan for the patient. However, other possible factors must also be considered when evaluating treatment response

### COMMENTS

1. Chronic Myelogenous leukemia (CML) is characterized by the presence of the Philadelphia chromosome (Ph), the product of the t(9;22)(q34;q11) translocation. This translocation results in the BCR-ABL1 fusion protein with constitutive ABL tyrosine kinase activity. Acute myeloid/lymphoid leukemia (AML/ALL) are also known to carry Ph chromosome in a group of patients.
2. The first generation tyrosine kinase inhibitor (TKI)- Imatinib is recommended as the first line therapy for BCR-ABL1 positive leukemia that inhibits ABL1 kinase activity.
3. A significant number of patients harbor point mutations in the ABL1 kinase domain that renders the leukemic cells resistant to prescribed TKIs.
4. This test detects all known as well as novel point mutations in the ABL1 kinase domain that may be leading to therapy resistance.
5. Resistance and prognosis is varied for each mutation. Change in dosage, shift to a next-generation TKI are some of the measures to combat therapy resistance.

### REFERENCES

1. Hochhaus A, Baccarani M, Silver RT, Schiffer C, Apperley JF, Cervantes F, et al. European LeukemiaNet 2020 recommendations for treating chronic myeloid leukemia. *Leukemia* 2020;1–19. <https://doi.org/10.1038/s41375-020-0776-2>.
2. Radich JP, Deininger M, Abboud CN, Altman JK, Berman E, Bhatia R, et al. Chronic Myeloid Leukemia, Version 1.2019, NCCN



Dr. Shivani Sharma, DCP, DNB  
Reg. No. 1906

Dr. Rahul Katara, Ph.D.

# hemaCÖRE

## Your Test Result

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- Clinical Practice Guidelines in Oncology. J Natl Compr Canc Netw 2018;16:1108–35. <https://doi.org/10.6004/jnccn.2018.0071>.
3. Hochhaus A, Saussele S, Rosti G, Mahon F-X, Janssen JJWM, Hjorth-Hansen H, et al. Chronic myeloid leukaemia: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Ann Oncol Off J Eur Soc Med Oncol 2018;29:iv261. <https://doi.org/10.1093/annonc/mdy159>.
4. Jabbour E, Kantarjian H. Chronic myeloid leukemia: 2018 update on diagnosis, therapy and monitoring. Am J Hematol 2018;93:442–59. <https://doi.org/10.1002/ajh.25011>.
5. Mughal TI, Radich JP, Deininger MW, Apperley JF, Hughes TP, Harrison CJ, et al. Chronic myeloid leukemia: reminiscences and dreams. Haematologica 2016;101:541–58



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## Question?

Contact us at **+91 124 4615 615**

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2. The test results relate specifically to the sample received in the lab and are presumed to have been generated and transported per specific instructions given by the physicians/laboratory.
3. The reported results are for information and are subject to confirmation and interpretation by the referring doctor.
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