**Table (1): Fluorochrome-labeled monoclonal antibodies used:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Tube 1** | CD45 | CD10 | CD34 | CD19 | CD13 | CD2 |
| **Tube 2** | CD45 | CD33 | HLA-DR | CD7 |  |  |
| **Monocytic markers** | CD11c | CD11b | CD64 | CD14 | CD4 |  |
| **Additional Myeloid markers** | MPO | CD117 |  |  |  |  |

**Table (2): Relation between MYH11 and some laboratory tests (n = 24)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Laboratory tests** | **MYH11 (CBFB::MYH11)** | | | | **Test of sig.** | **P** |
| **Negative (n = 22)** | | **Positive  (n = 2)** | |
| **No.** | **%** | **No.** | **%** |
| **CBC** |  | |  | |  |  |
| **Platelets (×**109 /l**)** |  | |  | | U =16.0 | 0.530 |
| Median (Min. – Max.) | 32.50 (10.0 – 200.0) | | 25.50 (17.0 – 34.0) | |  |  |
| **WBCs (×**109 /l**)** |  | |  | | U= 8.0 | 0.144 |
| Median (Min. – Max.) | 49.33 (0.77 – 153.0) | | 18.96 (16.92 – 21.0) | |  |  |
| **Hemoglobin (g/dl)** |  | |  | | t=0.603 | 0.634 |
| Mean ± SD. | 8.07 ± 1.88 | | 8.75 ± 1.48 | |  |  |

t: Student t-test , U: Mann Whitney test

**Table (3): Relation between CBFB::MYH11 fusion and patients outcome (n = 24)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **MYH11 (CBFB::MYH11)** | | | |
| **Negative (n = 22)** | | **Positive  (n = 2)** | |
| **No.** | **%** | **No.** | **%** |
| Refractory to treatment | 15 | 62.5 | 0 | 0.0 |
| Partial remission | 3 | 12.5 | 0 | 0.0 |
| Complete remission | 4 | 16.7 | 2 | 8.3 |
| No relapse | 19 | 79.2 | 0 | 0.0 |
| Relapse | 3 | 12.5 | 2 | 8.3 |
| **Died** | 21 | 87.5 | 1 | 4.2 |
| **Alive** | 1 | 4.2 | 1 | 4.2 |

**Table (3): Distribution of the AML patients according to OS (n = 24)**

|  |  |  |
| --- | --- | --- |
| **Overall survival (OS)** | **No.** | **%** |
| <24 months | 22 | 91.7 |
| ≥24 months | 2 | 8.3 |
| **Total** | 24 | 100 |

**Table (4): Kaplan-Meier survival curve for OS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Mean (months)** | **Median (months)** | **% 1 year** | **% End Study** |
| **Overall Survival** | 6.771 | 5.0 | 12.5% | 8.3% |

**Table (5): Frequency of genetic variants according to clinical significance in both groups**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Clinical significance** | **Total** | | **Benign** | | **Likely benign** | | **Not reported** | | **Pathogenic** | | **Likely pathogenic** | | **Uncertain**  **Significance** | |
| **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Variants of 2 +ve cases** | **(n = 28)** | | **(n = 24) (85.7%)** | | **(n = 0) (0%)** | | **(n = 1) (3.6%)** | | **(n = 3) (10.7%)** | | **(n = 0) (0%)** | | **(n = 0) (0%)** | |
| FLT3 | **15** | 53.6 | 14 | 58.4 | 0 | 0.0 | 1 | 100 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| FLT3ITD | **0** | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| HRAS | **3** | 10.7 | 3 | 12.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KIT | **4** | 14.3 | 4 | 16.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KRAS | **5** | 17.8 | 3 | 12.5 | 0 | 0.0 | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 0 | 0.0 |
| NRAS | **1** | 3.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 | 0 | 0.0 |
| **Variants of 22 –ve cases** | **(n = 311)** | | **(n = 241) (77.5%)** | | **(n = 1) (0.3%)** | | **(n = 34)**  **(10.9%)** | | **(n = 33) (10.6%)** | | **(n=2) (0.6%)** | | **(n = 0) (0%)** | |
| FLT3 | **149** | 48.2 | 139 | 8.7 | 1 | 100 | 8 | 23.5 | 1 | 3.0 | 0 | 0.0 | 0 | 0.0 |
| FLT3ITD | **26** | 8.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 26 | 78.7 | 0 | 0.0 | 0 | 0.0 |
| HRAS | **13** | 4.2 | 12 | 1.9 | 0 | 0.0 | 1 | 2.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KIT | **53** | 17.2 | 51 | 2.5 | 0 | 0.0 | 0 | 0.0 | 2 | 6 | 0 | 0.0 | 0 | 0.0 |
| KRAS | **66** | 20.7 | 39 | 1.9 | 0 | 0.0 | 24 | 70.5 | 2 | 6 | 1 | 50.0 | 0 | 0.0 |
| NRAS | **4** | 1.3 | 0 | 0.0 | 0 | 0.0 | 1 | 2.9 | 2 | 6 | 1 | 50.0 | 0 | 0.0 |

**Table (6): Frequency of genetic variants according to function effect on protein in both groups**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Function effect** | **Total** | | **Non sense** | | **Missense** | | **Synonymous** | | **Un known** | |
| **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Variants of 2 +ve cases** | **(n = 28)** | | **(n = 0) (0%)** | | **(n = 5) (17.9%)** | | **(n = 5) (17.9%)** | | **(n=18) (64.3%)** | |
| FLT3 | 15 | 53.6 | 0 | 0.0 | 1 | 20 | 1 | 20 | 13 | 72.2 |
| HRAS | 3 | 10.7 | 0 | 0.0 | 0 | 0.0 | 2 | 40 | 1 | 6.3 |
| KIT | 4 | 14.3 | 0 | 0.0 | 1 | 20 | 0 | 0.0 | 3 | 18.8 |
| KRAS | 5 | 17.8 | 0 | 0.0 | 2 | 40 | 2 | 40 | 1 | 6.3 |
| NRAS | 1 | 3.6 | 0 | 0.0 | 1 | 20 | 0 | 0.0 | 0 | 0.0 |
| **Variants of 22 –ve cases** | **(n = 311)** | | **(n = 1) (0.32%)** | | **(n = 46) (14.7%)** | | **(n = 37) (11.9%)** | | **(n = 227) (73%)** | |
| FLT3 | **175** | 56.2 | 1 | 100 | 38 | 82.6 | 5 | 13.5 | 131 | 57.7 |
| HRAS | **13** | 4.2 | 0 | 0.0 | 1 | 2.2 | 9 | 24.3 | 3 | 1.3 |
| KIT | **53** | 17 | 0 | 0.0 | 1 | 2.2 | 3 | 8.10 | 49 | 21.6 |
| KRAS | **66** | 21.2 | 0 | 0.0 | 2 | 4.3 | 20 | 54 | 44 | 19.4 |
| NRAS | **4** | 1.3 | 0 | 0.0 | 4 | 8.7 | 0 | 0.0 | 0 | 0.0 |

**Table (7): Classification of genetic variations according to their genetic location**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Clinical significance** | **Total** | | **Intron** | | **Exon** | | **Splice site`3** | | **UTR`3** | | **UTR`5** | |
| **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Variants of 2 +ve cases** | **(n = 28)** | | **(n = 16) (57.1%)** | | **(n = 10) (35.7%)** | | **(n = 2) (7.14%)** | | **(n = 0) (0%)** | | **(n = 0) (0%)** | |
| FLT3 | **15** | 53.6 | 11 | 68.7 | 2 | 20 | 2 | 100 | 0 | 0.0 | 0 | 0.0 |
| HRAS | **3** | 10.7 | 1 | 6.25 | 2 | 20 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KIT | **4** | 14.3 | 3 | 18.7 | 1 | 10 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KRAS | **5** | 17.8 | 1 | 6.25 | 4 | 40 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| NRAS | **1** | 3.6 | 0 | 0.0 | 1 | 10 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **Variants of 22 –ve cases** | **(n = 311)** | | **(n = 191) (61.4%)** | | **(n = 91 ) (29.2%)** | | **(n = 20)**  **(6.4%)** | | **(n = 7) (2.2%)** | | **(n=2) (0.6%)** | |
| FLT3 | **175** | 56.2 | 110 | 57.6 | 45 | 49.4 | 20 | 100 | 0 | 0.0 | 0 | 0.0 |
| HRAS | **13** | 4.2 | 0 | 0.0 | 11 | 12 | 0 | 0.0 | 0 | 0.0 | 2 | 100 |
| KIT | **53** | 17 | 49 | 25.6 | 4 | 4.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| KRAS | **66** | 21.2 | 32 | 16.7 | 27 | 29.6 | 0 | 0.0 | 7 | 100 | 0 | 0.0 |
| NRAS | **4** | 1.3 | 0 | 0.0 | 4 | 4.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |