BACKGROUND

- Next Generation Sequencing (NGS) in plasma samples can be used to detect molecular alterations, including the presence of mutations which may mediate acquired resistance to drug therapy.

METHODS

- Multi-center study
- Treatment with 235mg oral crizotinib or food or feeding for 14 days
- Assessed for response to therapy using RECIST 1.1
- Adverse events (AEs) using CTCAE version 4.03 were recorded
- Plasma samples were collected on the first day of each cycle
- Plasma samples were collected on the first day of each cycle

RESULTS

ALK+ Patients

- ALK TKI Naïve Patients
  - Prior crizotinib, Ceritinib, and Brigatinib
  - Prior ALK TKI Treatment:
    - 1
    - 2
    - 3
    - 4
  - Ethnicity:
    - Caucasian
    - African American
    - Hispanic
    - Unknown
  - Sex:
    - Male
    - Female
  - ECOG performance status (PS) 0-1

- ALK TKI Naïve Patients
  - NGS in Plasma Baseline (allele frequency)
  - NGS in Tissue Baseline (allele frequency)
  - NGS in Plasma End of Treatment (allele frequency)
  - NGS in Tissue End of Treatment (allele frequency)

- Prior Crizotinib Patients
  - Patient is still on treatment in cycle 14

- Prior Crizotinib Only Patients
  - Patient is still on treatment in cycle 13

- Prior Crizotinib and Ceritinib Patients
  - Patient is still on treatment in cycle 12

- Prior Crizotinib, Ceritinib, and Brigatinib Patients
  - Patient is still on treatment in cycle 11

- ALK TKI Naïve Patient – PR
  - Variants detected in plasma NGS

- Crizotinib Resistant Patient – PR
  - Variants detected in plasma NGS

- Crizotinib & Ceritinib Resistant Patient – PR
  - Variants detected in plasma NGS

CONCLUSIONS

- ALK TKI Naïve Patient – PR
  - Variants detected in plasma NGS

- Crizotinib Resistant Patient – PR
  - Variants detected in plasma NGS

- Crizotinib & Ceritinib Resistant Patient – PR
  - Variants detected in plasma NGS

REFERENCES


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