Fast4ward Learning
Empowering Minds & Transforming Lives

Key Takeaways: Challenging Cases in Cancer: AML

Case Presentation: Newly Diagnosed AML Patient

- A 76-year-old male with CAD, HTN, and hyperlipidemia presented with fatigue and shortness of breath.
- Initial lab results: Pancytopenia, 10% circulating blasts, normal renal and liver function, normal EKG
- Bone marrow biopsy revealed 40% myeloblasts

Initial Workup and Management

- Additional tests and supportive management are needed
- Treatment decisions pending cytogenetics, FISH, and NGS results

Cytogenetics and NGS Results

- Trisomy 8, TET-2 mutation (VAF 30%), IDH1 mutation (VAF 10%)

First-Line Treatment Decisions

- Treatment started with azacitidine and venetoclax with prophylactic antibiotics
- After cycle 1, bone marrow was hypocellular with no increased blasts; cycle 2 was delayed for count recovery
    - Venetoclax dose was reduced to 14 days on/14 days off

NCCN Recommendations for Lower-Intensity Therapy

- Azacitidine + venetoclax
- Decitabine + venetoclax
- LDAC + venetoclax
- Specific treatments for IDH1, IDH2, CD33, and FLT3 mutations

Relapsed/Refractory Management

- After 13 cycles, counts did not recover, leading to further delay and transfusional support
- Bone marrow biopsy confirmed relapsed AML with 15% myeloblasts
- Cytogenetics showed Trisomy 8; NGS revealed increased TET-2 and IDH1 mutation
- Treatment options in relapsed/refractory setting include clinical trials, less aggressive therapies (HMAs, LDAC, venetoclax), and targeted therapies for IDH1 mutations such as olutasidenib and ivosidenib.

Relapse Assessment and Management post Venetoclax Failure

- Patient started treatment with Olutasidenib (OLU), an IDH1 inhibitor
- OLU was chosen based on real-world data showing superior outcomes compared to ivosidenib (IVO) in IDH1-mutated relapsed/refractory AML after venetoclax failure.
- OLU showed higher CRc, TI, and longer mOS (16.23 vs 2.96 months)
- Further research is needed to validate these findings.