Submission Topic: How can we effectively integrate emerging immunotherapies and targeted therapies into existing treatment protocols to improve patient outcomes?

Full Name:
Dr. Senthamizhan.VS

Name of the Institution:
Regional Cancer Centre

State:
Kerala

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):
Title: Integrating Immunotherapy in Acute Myeloid Leukemia (AML)
Background: Patients with Acute Myeloid Leukemia (AML), particularly those classified under the French-American-British (FAB) subtypes M4 and M5, often present with lymphadenopathy and extramedullary disease. These subtypes generally have poorer outcomes compared to other AML variants, potentially due to the involvement of a lymphoid component.
Rationale: We aim to explore the therapeutic potential of targeting the lymphoid component in AML M4/M5 using immunotherapy. By integrating PD-L1 inhibition into standard treatment regimens, we hypothesize that outcomes in this subset of patients can be improved.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):
Study Design Overview

1. Patients diagnosed with AML M4/M5 who are planned for treatment with Azacitidine plus Venetoclax and who present with lymph node or extramedullary involvement will be enrolled. These patients will undergo PD-L1 expression assessment.
2. Treatment Protocol: In addition to Azacitidine and Venetoclax, patients will receive a PD-L1 inhibitor (e.g., Atezolizumab).
3. Scientific Basis
Venetoclax, a BCL-2 inhibitor, can induce immunogenic cell death (ICD). This process leads to the release of damage-associated molecular patterns (DAMPs), thereby enhancing tumor immunogenicity and making immunotherapeutic strategies, such as PD-L1 inhibition, more effective.
4. Endpoints
- Overall Response Rate (ORR)
- Progression-Free Survival (PFS)
- Overall Survival (OS)

4. Stratification
Patients will be stratified based on PD-L1 expression levels into three groups:
- <1%
- 1%-10%
- >10%

This stratification will help determine whether the degree of PD-L1 expression correlates with response to combined immunotherapy and standard AML treatment