Stem cell transplantation for immunoglobulin light chain (AL) amyloidosis

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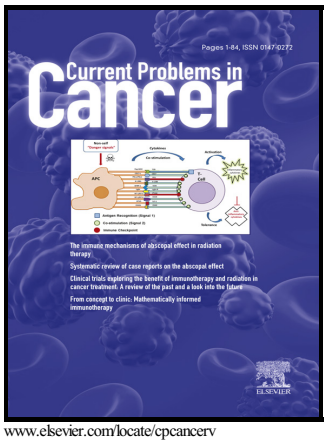

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Introduction:

Immunoglobulin light chain amyloidosis (AL) is a plasma cell dyscrasia characterized by extracellular deposition of amyloidogenic light chain fragments that result in progressive organ dysfunction. With a median survival of 12-17 months AL is a fatal disease[1] as death results from rapid clinical deterioration due to the involvement of heart, kidneys, liver and the gastrointestinal tract. Treatment of AL involves the use of antineoplastic therapy aiming at eradicating the underlying transformed plasma cells, the source of amyloidogenic light chains, and providing organ directed supportive care. Anti-plasma cell therapy in AL has evolved along the lines of multiple myeloma and involves standard dose therapy or high dose myeloablative therapy as part of autologous stem cell transplantation (SCT). In this review we focus on the evolution of the role of SCT in AL, the unique challenges it poses in the management of AL patients and its evolving role in the era of new treatment modalities.