



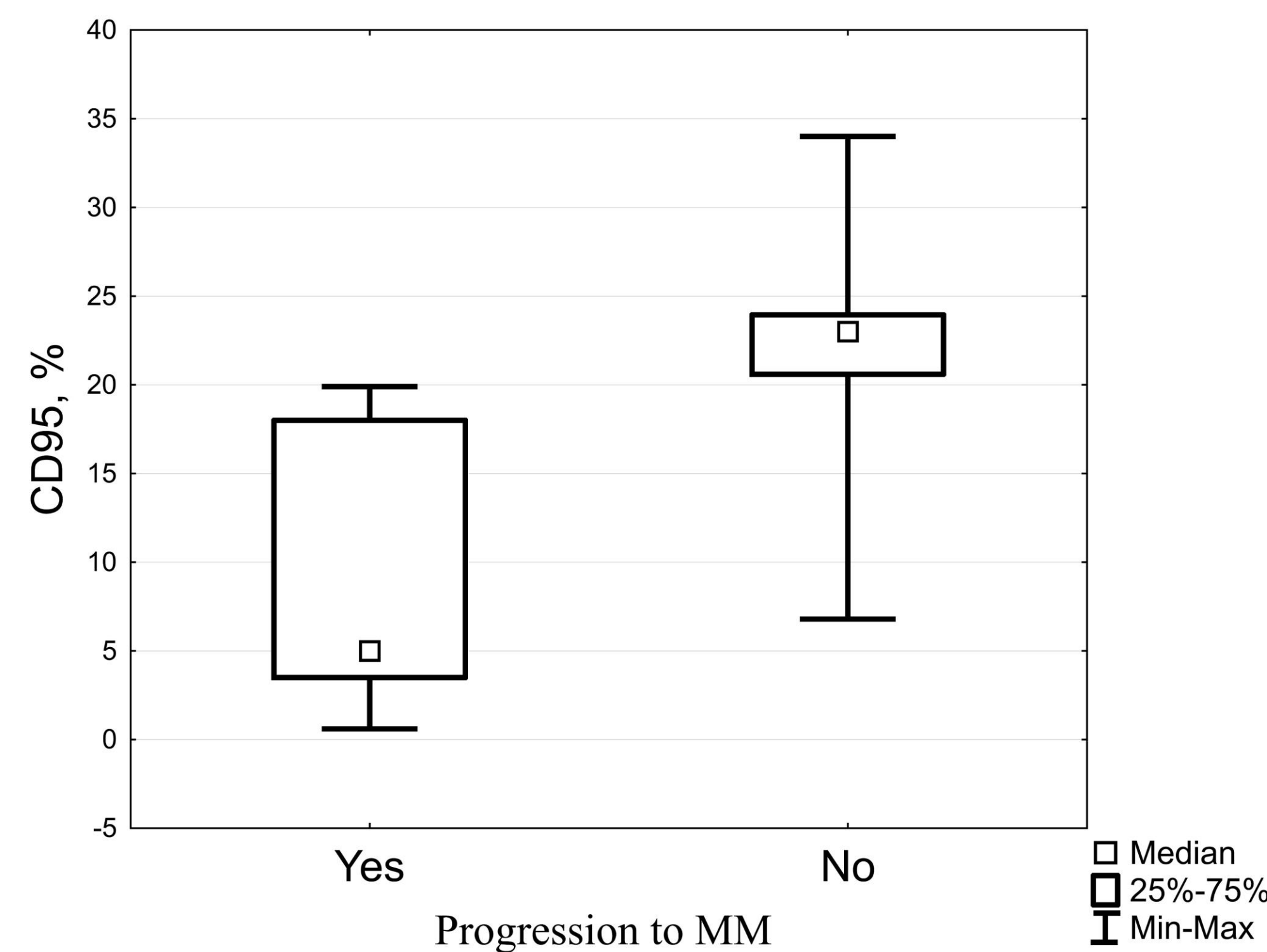
Factors of an Unfavorable Prognosis in Patients with Solitary Plasmacytoma among Residents of Gomel Region of Belarus

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Introduction

Solitary plasmacytoma is a tumor of plasma cells with local proliferation without signs of systemic damage and a high risk of progression to multiple myeloma. Depending on the presence of a lesion in the bone or in soft tissues, there are solitary plasmacytoma of bone and solitary extramedullary plasmacytoma. There are currently few data available on prognostic factors.

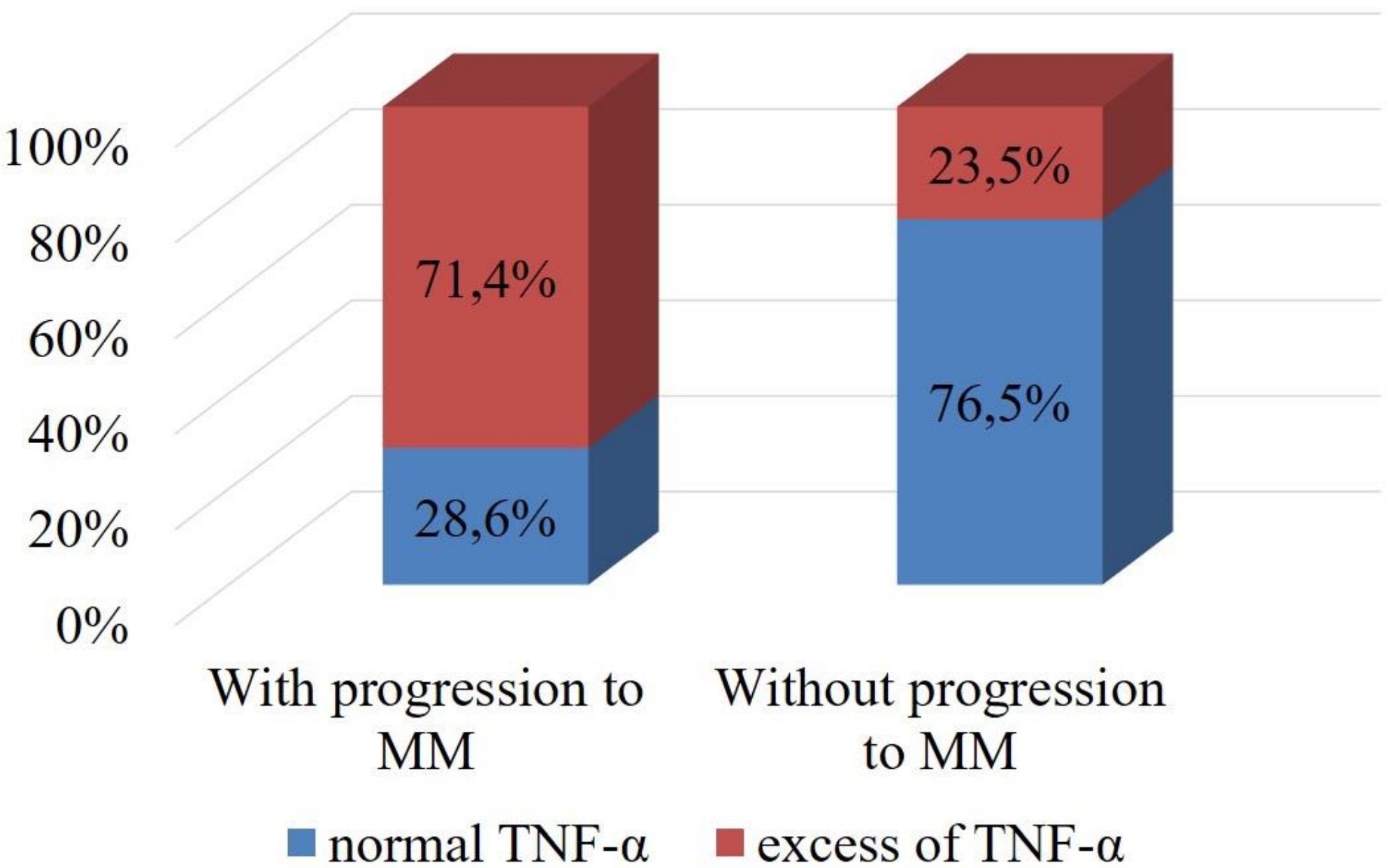


Materials & Methods

The study included 24 patients with SP (4 patients with solitary extramedullary plasmacytoma and 20 patients with solitary bone plasmacytoma) of Gomel region (Belarus) 2018-2021 with different anatomical localization. The diagnosis was histologically confirmed. The average age was 62 (from 41 to 79 years); female patients prevailed 54.2% (13/11). All patients underwent aspiration biopsy with IFT and FISH, trepanobiopsy of the iliac wing with immunohistochemical examination of the bone marrow, and X-ray examination of the skeletal bones. Results were assessed after 3 years of observation. The signs of progression include the appearance of any one of the CRAB-criteria.

Results

The presence of clonal plasma cells <10% or an aberrant phenotype was detected in 42% of cases.



Monoclonal protein (M-protein) was found in serum and / or urine in 21% of cases. The immunoglobulin light chain ratio was normal at 62.5% and abnormal at 37.5%. Large tumor sizes (> 5 cm) were detected in 4 patients (all of them progressed to MM). During the observation period, the progression of the disease to MM was recorded in 7 patients (29.2%). The period to progression was 10 months (media) (3-18). An immunophenotypic study in these patients revealed a significant decrease in

the CD95 level (p = 0.001), in 71.4%, a significant excess of the TNF-α level (p = 0.001) and a significant excess of the B2 microglobulin level (p = 0.001) were revealed. One patient with a tumor size > 5 cm, the presence of 3.1% tumor cells in BM, del13, progressed within 3 months. The three-year survival rate was 100%. Local relapse developed after 4 courses of PAD in 1 patient who progressed to MM.

Conclusion

The progression of the disease in patients was associated with the presence of cytogenetic changes (the presence of del13) in combination with the presence of aberrant or clonal cells in the bone marrow <10%, or IHC CD138 +, a decrease in the CD95 level with IFT, an excess of the TNF-α level, an excess of the B2 microglobulin level and large the size of the lesion (> 5 cm).