A FOCUS ON CANCER-RELATED CACHEXIA AND SARCOPENIA IN HEMATOLOGIC MALIGNANCIES

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INTRODUCTION

Limited research focused on cancer-related cachexia (CRC) and sarcopenia (SAR) among patients with hematologic malignancies.

Identified need to increase awareness of CRC and SAR in this population and how these factors impact ability to tolerate treatment, quality of life, and survival.

AIM

Build a foundation of knowledge from review of the scientific literature on CRC and SAR among survivors of hematologic malignancies focused on:

-Incidence and prevalence in hematologic malignancies

-Correlation with health outcomes

Survival and Quality of Life

METHOD

Integrative Review

- Conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines
- Studies published between 2012-2022 in English
- Adults with hematologic malignances
- Data related to cancer-related cachexia or sarcopenia
- Databases searched : Ovid MEDLINE, CINAHL Complete, Embase, and Web of Science

RESULTS

Twenty-nine studies

- 13 examined cachexia
- 16 examine sarcopenia

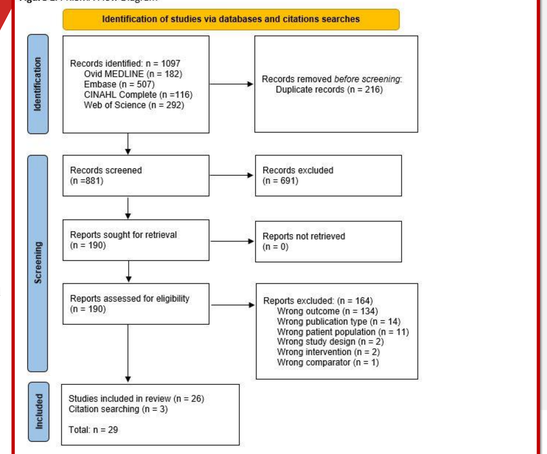
Twenty-three studies retrospective

5687 patients represented, primarily diagnosed with diffuse large B cell lymphoma

International representation

- 49% from Asia
- 31% from USA
- 27.6% from Europe

Figure 1. PRISMA Flow Diagram



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

Extracted Data

Overall Survival	DLBCL sar male w 30.2 mo c/w NR in non-sar (p=0.02)[1]	MCL and DLBCL CRC w worse OS (p=0.004)[2]	70+ yrs heme malig.6 mo OS for CRC of 66.1% c/w 84.5% in non CRC, log-rank (p<0.001)[3]	Sar DLBCL txt with CHOP-R 5-yr OS 37.3%vs 68.1% (p<0.001)[4]
Progression- free Survival	DLBCL sar male w 5.4 mo PFS c/w non-sar 72.3 mo (p<0.005)[1]	MCL and DLBCL CRC w worse PFS (p=0.044)[2]	Sar DLBCL txt w CHOP-R PFS 35.3% vs. 65.8% (p< 0.001)[4]	Older sar DLBCL txt w chemo+R no diff in PFS (p=0.260)[5]
Response to Treatment	Lower prognostic nutritional index (PNI) w inc txt related mortality (15.9% vs 5.7%)[6]	CR rates lower in low-PNI vs high-PNI 60.3% vs 87.6%,p<0.001)[6]	Sar DLBCL tx with CHOP-R CR rate lower vs. Non-Sar (68.7% vs 80.9%, p= 0.004)[4]	Sar DLBCL txt w CHOP-R w lower CR rates and PD (p=0.003)[7]
Heme Parameters	DLBCL tx 1st line CHOP-R low PNI incidence of grade ≥ 3 neutropenia 91.3% vs 78%[8]	DLBCL tx 1st line CHOP-R low PNI incidence of grade > 3 thrombocytopenia 43.5% vs. 18.9%[8]	DLBCL txt 1st line CHOP-R low PNI incidence of grade > 3 febrile neutropenia 53.6% vs. 22.0%[8]	DLBCL txt 1st line CHOP-R low PNI treatment discontinuation 43.5% vs. 8.8%[8]

DLBCL=diffuse large B cell lymphoma, Sar-sarcopenia, NR=not reached, mo=month, MCL=mantle cell lymphoma, OS=overall Survival, CRC=cancer-related cachexia, TXT-Treatment, PFS=progression free survival , CHOP-R=cyclophosphamide, hydroxydaunorubicin, oncovin, prednisone, and Rituximab, tox=Toxicity, PD=progressive disease

CONCLUSIONS

- Overall survival and progression free survival significantly reduced in patients with CRC and SAR
- CRC and SAR decrease ability to tolerate treatment
- Complete response rates lower in SAR patients- related to inability to receive intended dose of treatment
- Increased hematologic toxicity in patients with low prognostic nutritional index
- Further research is needed to improve our understanding of this phenomenon

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