

Supportive & Palliative care, Rehabilitation & Survivorship

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Introduction

Cancer-related fatigue (CrF) is one of the most common sequelae in cancer patients and is therefore of great importance for the quality of life and professional participation of the affected patients. According to current studies, 40 to over 70% of all patients are affected. The pathogenesis remains unknown, but there are many factors that can influence the course and severity of CrF (see **figure 1**).

The aim of this prospective data collection was to evaluate the incidence of fatigue in oncological rehabilitation, to evaluate possible predictive factors and the therapeutic effects of multimodal fatigue therapy on its course.

Pathogenesis of Cancer-related Fatigue

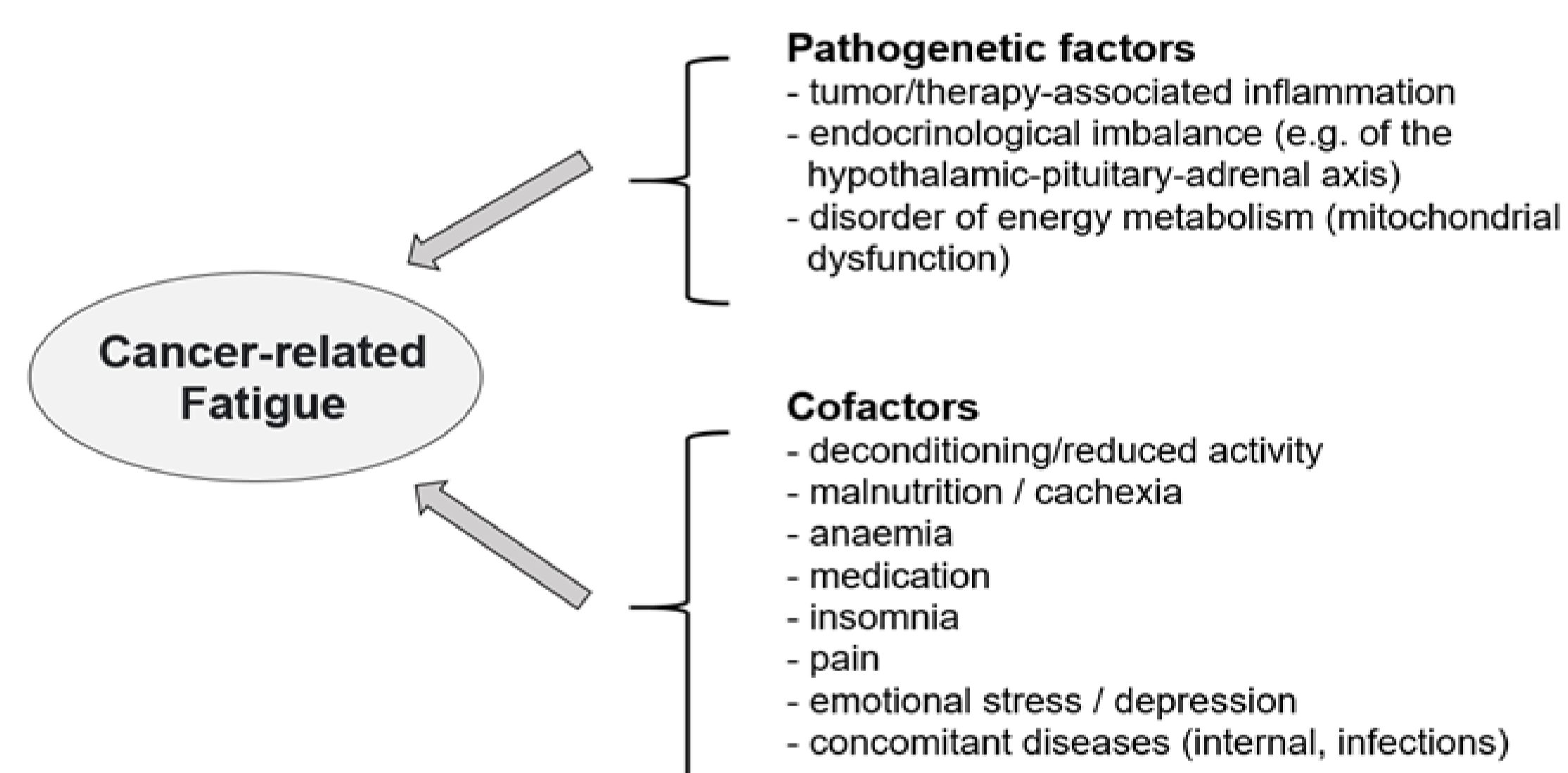


Figure 1

Methods

In total, this prospective study evaluated data from 1220 patients during oncological inpatient rehabilitation. The incidence of CrF was systematically recorded at the beginning and at the end of rehabilitation using standardized screening forms (SIF, ESAS). In addition, the performance and muscle strength were evaluated using a 6-min walk test, TUG and hand strength measurement (Jamar). To demonstrate potential predictive factors for CrF, clinical and sociodemographic data were also analyzed.

Palliative setting, psychiatric disorders, anemia $\leq 8\text{g/dl}$ and/or sedative medication were exclusion criterias.

Results (I)

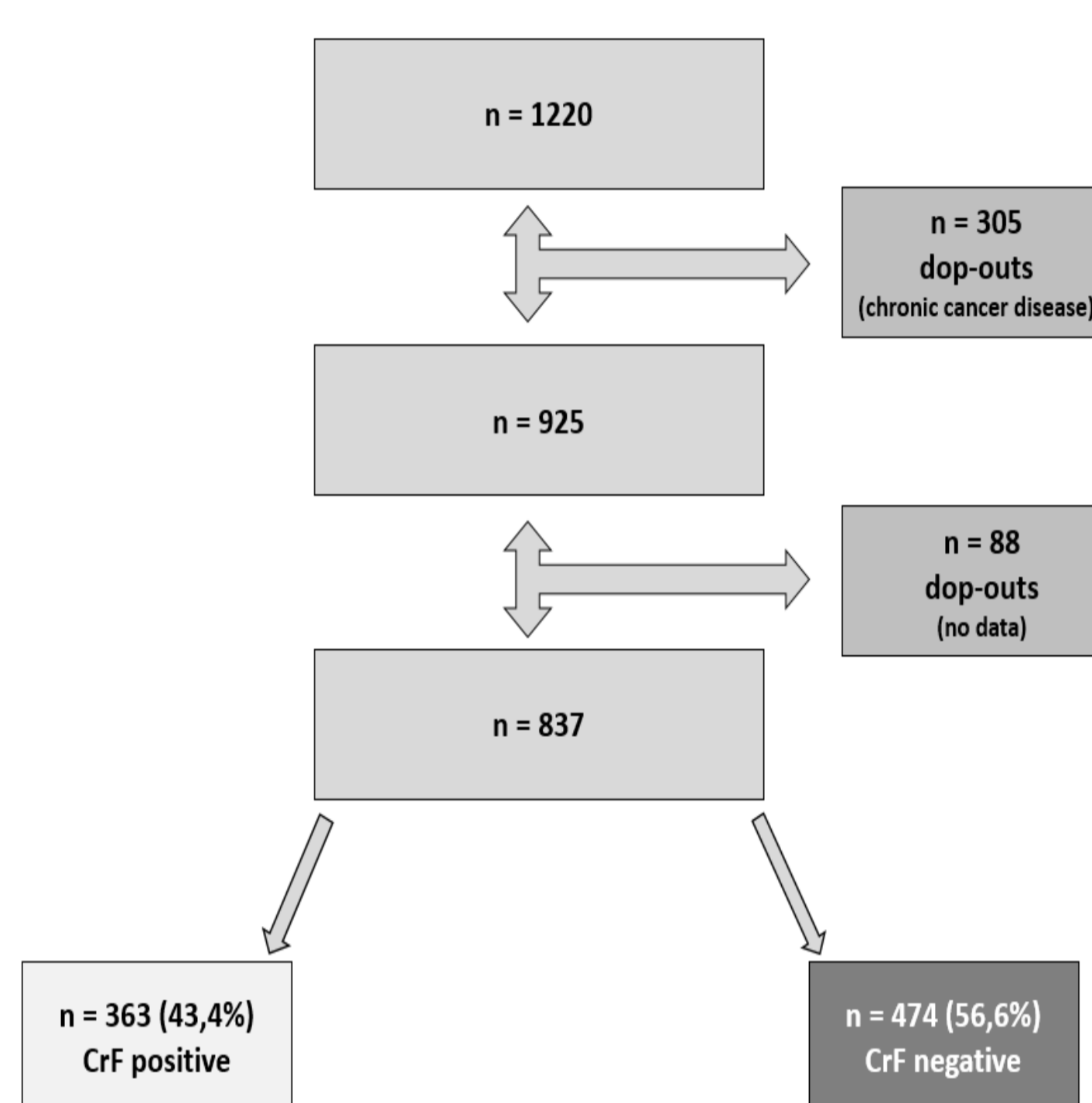


Figure 2

At the end of rehabilitation data of 837 patients (52.8% women, average age 64.5 years) were able to evaluate for fatigue incidence as well as potential predictive factors. Fatigue was detected in n = 363 (43.4%) cases (SIF ≥ 4 ; see **figure 2**).

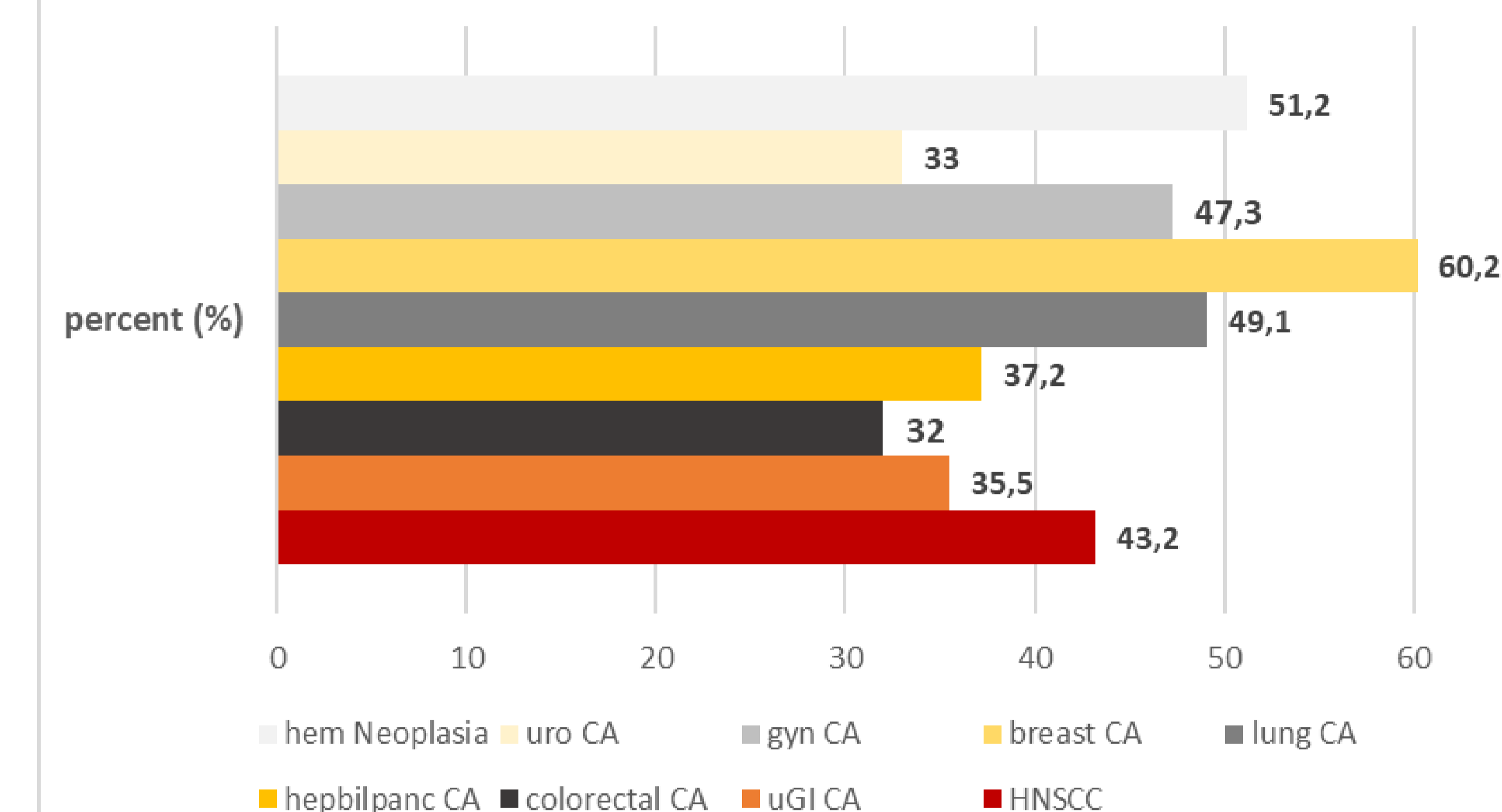
Results (II)

Increased SIF values correlated significantly in up to 94.8% with significantly increased values in the ESAS assessment. Furthermore, the increased SIF values correlated with gender (51.0% women vs. 37.8% men; $P < 0.001$) and patient age (51.7% (< 60 years) vs. 38% (≥ 60 years)); see **table 1**). In relation to cancer etiology, the group of women with breast cancer had the highest incidence (60.2%) and SIF values (4.58 ± 2.0) compared to the other tumor entities (see **figure 3**). Furthermore, increased SIF values correlated significantly with worse patient reported outcomes measures (PROMIS) in the mental and physical areas ($P < 0.01$) as well as with a subjectively significantly worse quality of life (43.1 ± 19.1 vs. 54.4 ± 20.1 ; $P < 0.001$).

Correlation between CrF and...	p
Age (≥ 60 years)	$P < 0.001$
Gender (♀)	$P < 0.001$
Promis-10	$P < 0.01$
QoL (EQ-5D)	$P < 0.001$

Table 1

CrF (SIF ≥ 4) in related to cancer diagnosis



Results (III)

At the end of rehabilitation there was a significantly reduced incidence of CrF (15.7% vs. 43.4%; $p < 0.001$). In addition, there was a significant improvement in PROMIS and quality of life (43.1 ± 19.1 vs. 58.5 ± 19.7 ; $p < 0.001$).

Conclusions

The data presented confirm the frequent incidence of CrF and their great importance to QoL. Cancer etiology (e.g. Breast cancer), age and female gender have been proven to be typical predictive factors for CrF. Otherwise, significant effects on its course as a result of inpatient rehabilitation and multimodal therapeutic approaches could be demonstrated.

Offenlegung potenzieller Interessenkonflikte:	Holger G. Hass & Co-Autoren
1. Anstellungsverhältnis oder Führungsposition	keine
2. Beratungs- bzw. Gutachtertätigkeit	keine
3. Besitz von Geschäftsanteilen, Aktien oder Fonds	keine
4. Patent, Urheberrecht, Verkaufslizenz	keine
5. Honorare	keine
6. Finanzierung wissenschaftlicher Untersuchungen	keine
7. Andere finanzielle Beziehungen	keine
8. Immaterielle Interessenkonflikt	keine