

The course of Fatigue in cancer survival

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Outline

- Definition and measurement of cancer related fatigue
- Associated symptoms
- Treatment options
- Future directions for services and research.

Definition

- No universally agreed definition
cut off score on VAS Single item question
- EORTC:
- **This defines fatigue as a subjective feeling of tiredness, weakness or lack of energy.**

LOREAL
MEN EXPERT

**HYDRA
ENERGETIC**

**ANTI-FATIGUE MOISTURISER
24H HYDRATION**

with Vitamin C + Magnesium

Fights 5 signs of fatigue

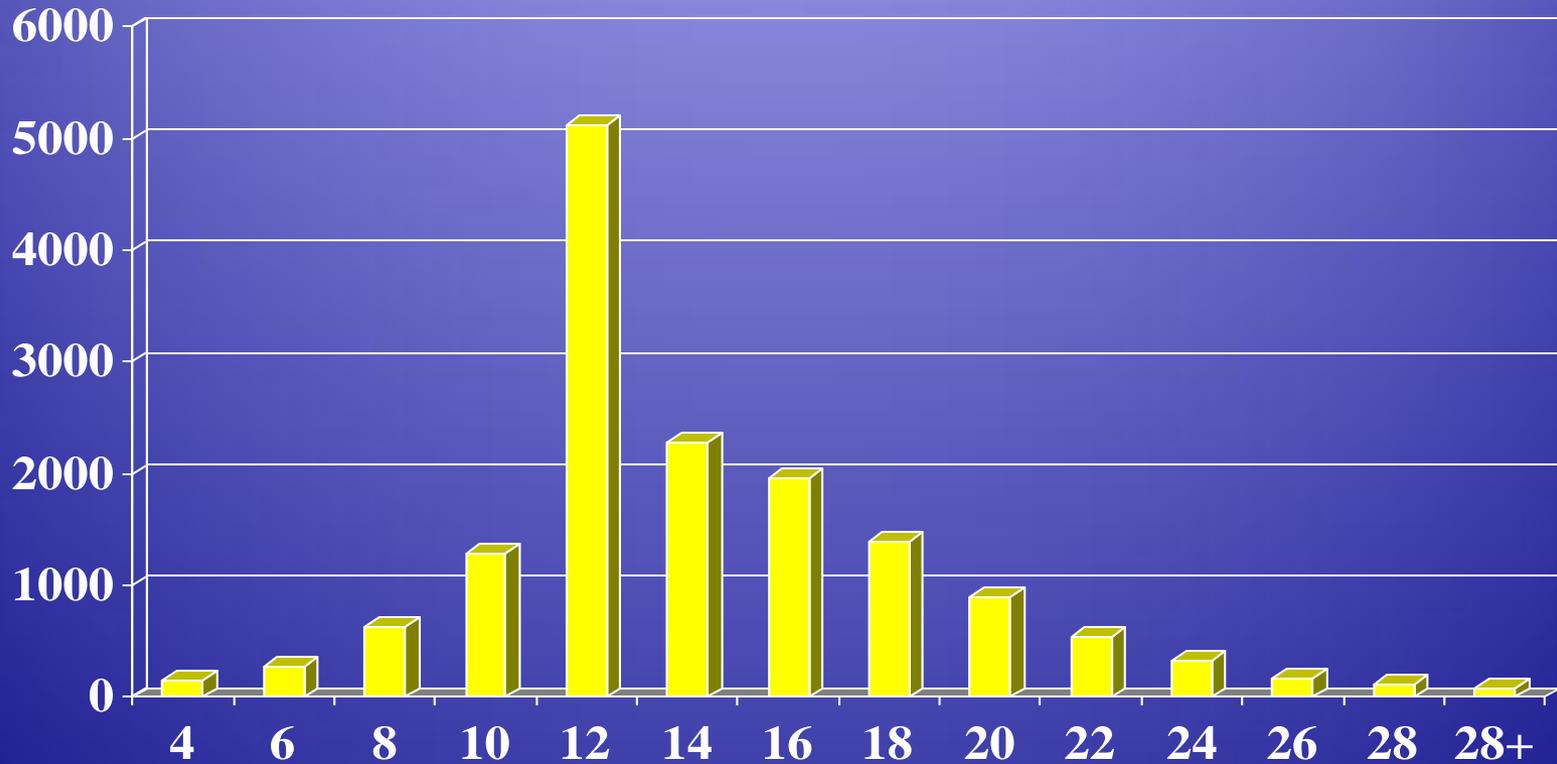
- Dryness ■
- Tightness ■
- Dullness ■
- Loss of Firmness ■
- Roughness ■

adcs

Prevalence

- Still ranked as one of the most troublesome symptoms by patients and professionals
Depending on definition or cut off score prevalence can vary from 60-90% in patients on treatment and in advanced disease
- Significant percentage can experience chronic fatigue (> 3months duration) after successful treatment for cancer.

General population



$n = 15283$



Measurement

- Fatigue is ubiquitous and there is a baseline prevalence in the general population.
- Tool needs to be population specific and validated.
- Over 20 tools used in cancer alone.

- Huge variation in frequency of usage
- Most frequently used
- FACT F – functional assessment of cancer therapy fatigue subscale
- EORTC QLQ 30 fatigue subscale
- All used in more than 5,000 pts

Prevalence of post treatment fatigue according to strict diagnostic criteria

- Cella et al 2001 – mixed cancer survivors
 - Telephone survey (n = 379)
 - Prevalence 17%
- Sadler et al 2002
 - Diagnostic interview (n = 51)
 - Post bone marrow transplant
 - Prevalence 23%

Breast cancer fatigue

- Dependant on measurement used
- Varies from 5-45% at up to two years
- Average 30%

2-5 years – much lower numbers <10%

Higher prevalence than age matched controls

Similar figures seen in other tumour groups.

Associated symptoms

- Low mood (not depression)
- Reduced quality of life
- Increased frequency of systemic upset
- More pain e.g. Shoulder /arm/breast
- Consistent across all studies
- Association with coping styles and adjustment

Associated outcomes

- A total of 278 subjects (105 cases of CRFS and 173 controls who did not meet the criteria)
- HADS score, EORTC pain and insomnia scales, breast systemic side effects and plasma sodium all independently linked.

However ...

- Fatigue not predicted by age, treatment modality or intensity
- Tumour stage
- Baseline mood – not secondary to depression.

Screening for Fatigue

- Recent work conducted in disease free breast cancer patients
- Divided into Fatigued and controls on basis of a interview
- 200 women interviewed , 60 met criteria for PTF

Conclusions for Practice

- The cut off scores could be used to determine clinically significant fatigue
- FACT F score <36 puts you into a category where intervention should be considered.
- Question is then what treatment should be offered.

Drug treatment

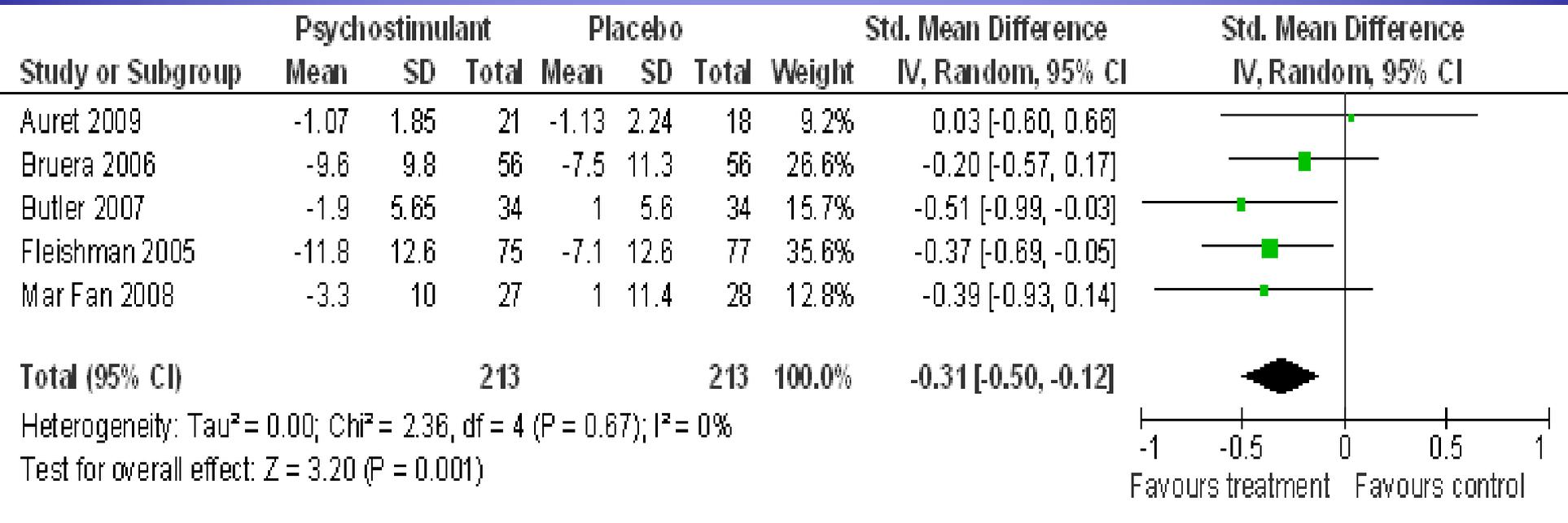
- Not overly relevant in PTF because of side effects
- 2 main classes have evidence for their use
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1) Haemopoetic growth stimulants

2) Psychostimulants

No effect with antidepressants

Psychostimulants

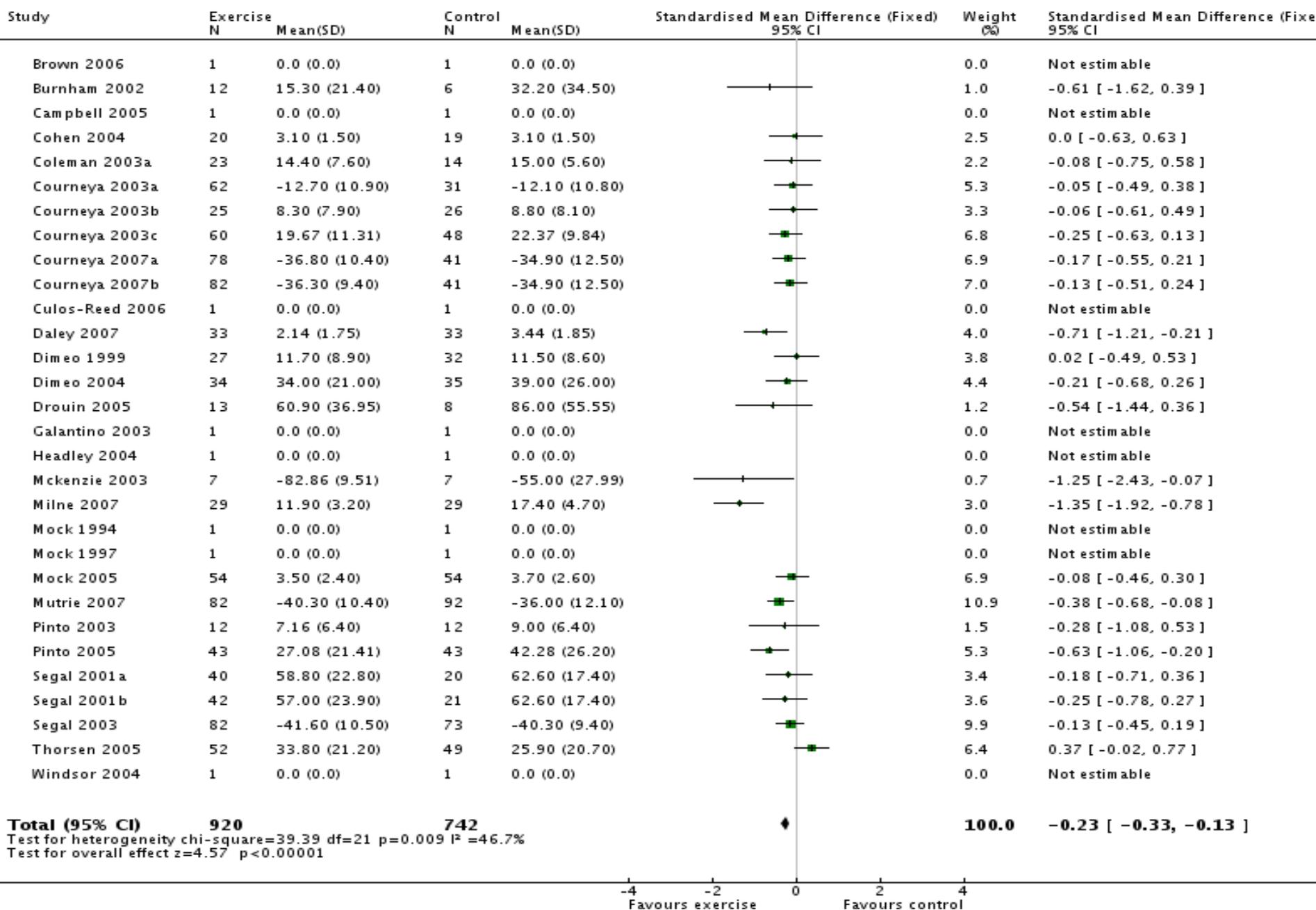


Exercise Cochrane review

Twenty-eight studies were identified for inclusion

At the end of the intervention period exercise was statistically more effective than the control intervention (SMD -0.23, 95% Confidence Interval (CIs) -0.33 to -0.13).

Review: Exercise for the management of cancer-related fatigue in adults
 Comparison: 01 Fatigue: All data
 Outcome: 01 Exercise versus no exercise control. Post test means.



Conclusions for practice

- According to the most recent recommendations from the American College of Sports Medicine (ACSM) adults should undertake moderate intensity aerobic physical activity for at least 30 minutes on five days per week.
- The majority of exercise interventions reviewed did not reach these recommendations as exercise was only undertaken two to three times per week at moderate intensity.

Complex interventions

- Two recent reviews
 - 1) Jacobsen et al 2007 – 24 studies included 2,500 participants
 - Overall effect size $z = 0.1$ 95% CI .02-.18
- 40% studies had at least one significant positive outcome

Complex (psychological type) interventions

- Variety of methods:
- Group format, CBT based , educational programs, supportive therapy
- Some telephone based others in person
- Wide variety in number and content of delivery
- Often single time point outcome
- High degree of heterogeneity limits replicability

Cochrane review

- Focused on CRF during active treatment and the role of psychosocial interventions in reducing CRF
- 27 studies included (3600 pts) but only 7 studies demonstrated improvement in fatigue.

Main results

- Five studies focused primarily on fatigue
- These five interventions specific for fatigue were short, consisting of three individual sessions, varying between 10 and 60 minutes, provided by (oncology) nurses.

Conclusions for practice

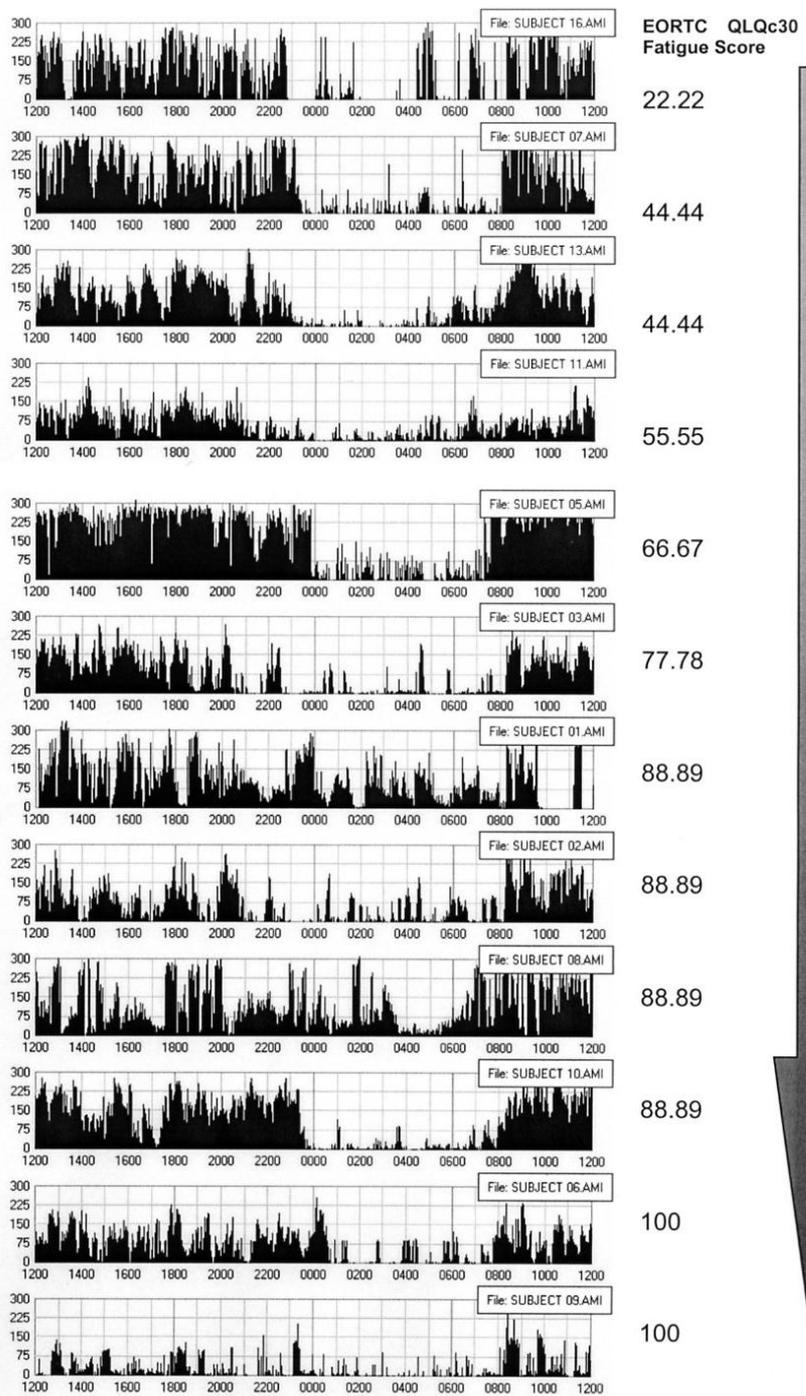
- Too early to draw specific conclusions
- Proof of concept with early results but unclear which specific element of the intervention is required to treat CRF.
- Small effect sizes and no meta-analysis possible
- Unclear to what extent treating other symptoms such as pain , anxiety leads to an improvement in fatigue

Subjective vs. Objective

- Complain fatigue but perform objectively as expected
- Equally possible to have no complaint but objectively below expected levels.
- Extrapolation to vocational and occupational functioning

Activity and sleep monitoring

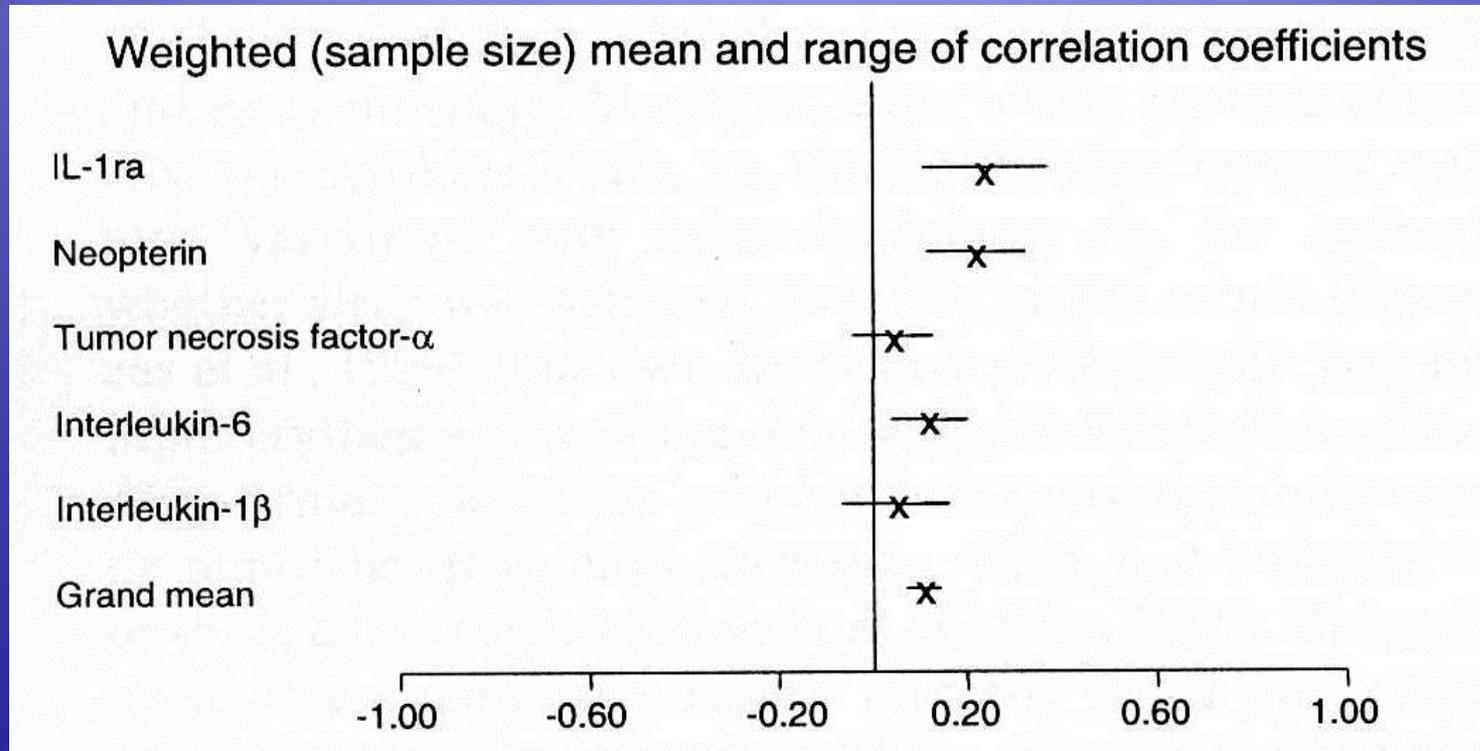




INCREASING LEVELS OF FATIGUE



Pro-inflammatory response in cancer fatigue?



Future directions

- Adding fatigue measurements to routine treatment monitoring (standardised across tumour groups) – use of registries
- Explanation to patients
- Identifying those at high risk of post treatment fatigue
- Matching the symptoms to underlying pathological changes.

Overall Conclusions

- Significant clinical problem during and after treatment
- Options for treatment limited but could include drugs and exercise
- Clearer mechanisms would lead to more targeted treatment and objective monitoring and screening.