# Fatigue **#3392 OBJECTIVE MEASUREMENT OF CANCER-RELATED** FATIGUE: CLINICAL AND RESEARCH IMPLICATIONS

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### INTRODUCTION

- Cancer-related fatigue (CRF) is one of the most common yet under-reported cancer symptoms.
- Despite behavioral correlates and prevalence, the pathophysiology is poorly understood.
- CRF mechanisms is central, peripheral, or both.
- Patient-reported outcome measures cannot provide insight into multifactorial pathophysiology alone.
- Objective measures are crucial for pathophysiology and have significant clinical and research implications.

## **METHODS**

2018

2024

This narrative review was conducted in two phases.

First, CRF-focused studies published through peer review

> Second, search results to identify more recent CRF publications

- **Professional guidelines were considered; editorials, letters** to the editor, or abstracts excluded.
- Literature was reviewed where cognitive or physical CRF was the primary outcome.

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**Electrical muscle** stimulation

Actigraphy

Finger tapping test

Laboratory measures

Positron emission tomography

Walk tests

Can be applied in the clinical space, focus on either cognitive or physical CRF domains, and validated in the cancer population.

## **Objective measure pathophysiology** research can significantly inform professional guidelines and future decision-making for CRF management.

Assesses non-invasive central and

**Examines peripheral fatigue without** 

**Demonstrates partial evidence for** 

Informs fatigue severity and cerebral

**Evaluates baseline physical activity** 

measuring CRF inflammation.

peripheral aspects of CRF.

Suggests central fatigue.

central involvement.

## RESULTS

- Sixteen objective CRF measures were identified.
- Six measures (TABLE) are highlighted.
- No professional guideline-informed consensus on the objective measurement of CRF exists.

Practicalities and Clin

Wrist-worn device du

Two types, surface or of variable expense; t

Device to record tapp second trials (recomm variable expense; ana

Blood draw; specialize

It may be cost-prohib expertise.

Needs a chair, stopwa walkway; inexpensive; special training.

## CONCLUSION

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and motor function.

function.





Now part of **ADVOCATE**HEALTH Correspondence: dori.beeler@atriumhealth.org

nical Utility*	Bedside
iring sleep; inexpensive; no expertise.	✓

|--|

oing number and inter-tap intervals; 10-20 mended 3 times); specialized equipment of	✓
alysis requires statistical software.	

zed equipment of variable expense.
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e; easy to administer in the clinic, no
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 Integrating objective measure(s) with patient-reported measures can support CRF management decision-making.

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