

Sarcopenia, Mobility, PHYsical activity and post-operative Risk of bladder carcinoma in the elderly (SAMPHYR-vessie)

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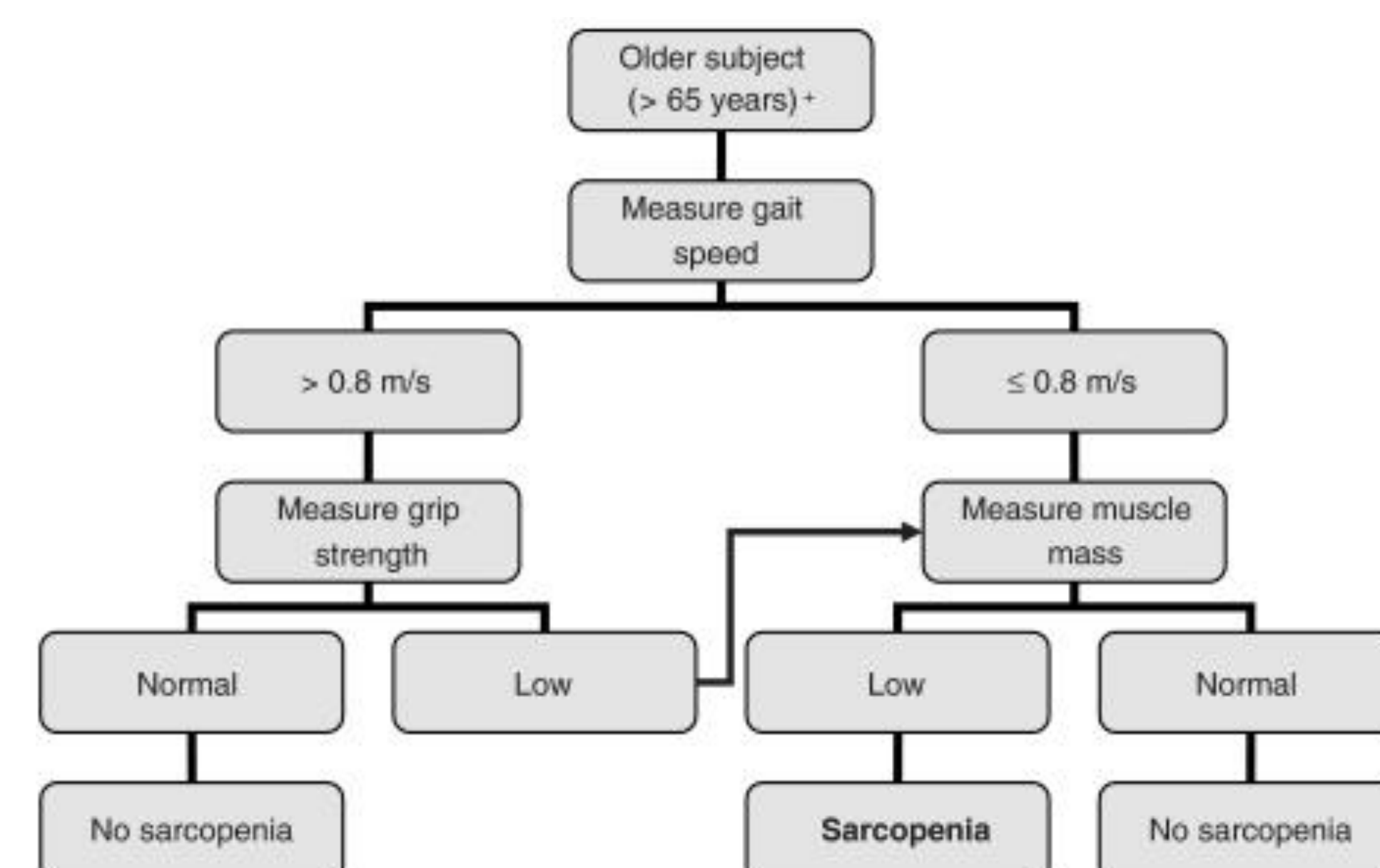
Introduction:

Sarcopenia increases with age, and is associated with poor prognosis in solid tumors (1).

According to **EWGSOP algorithm**, the diagnosis of sarcopenia is based on walking speed, grip strength and not only muscle mass. These three elements can easily be measured (specially muscle mass measurement by bioimpedancemetry or tomodensitometry)(2).

Only tomodensitometry-measured muscle mass prognosis has been studied in bladder cancer, without any consensus on abnormal thresholds (3, 4, 5). Although not yet investigated, sarcopenia could also contribute to poor prognosis in bladder carcinoma requiring cystectomy.

EWGSOP-suggested algorithm for sarcopenia case finding in older individuals. Age Ageing. 2010 Jul; 39(4): 412–423.



* Comorbidity and individual circumstances that may explain each finding must be considered
* This algorithm can also be applied to younger individuals at risk

Objectives: The main objective is to **compare morbimortality between 2 groups of older patients (sarcopenic and non-sarcopenic)** based on the evaluation of **30 days major surgical complications** (Clavien-Dindo classification), **and/or 6 months geriatric complications** (falls, autonomy loss, decreased physical activity, cognitive decline, denutrition, institutionalization).

Methods:

- **Population:** Patients with bladder cancer, aged 70 years and over, requiring cystectomy, will be included.
- **Exposure and Data measurements:**
 - EWGSOP sarcopenia criteria that include in particular, muscle mass by **bioimpedancemetry** (easier to use in outpatient) and also by tomodensitometry, in order to compare the muscle mass thresholds.
 - Mobility measurement will be carried out by the **QAPPA questionnaire** (validated in French in the elderly) and a quantitative measurement of activity and rest hours over one week by a **wrist actimeter**.
 - Data from Comprehensive Geriatric Assessment will also be collected: ADL, IADL for autonomy, MMSE for cognitive status, nutritional status (% weight loss, BMI), pain, GDS15 for depression screening, updated Charlson Comorbidity Index and STOPP-list to detect potentially inappropriate medication.
- **Sample size:** Accepting an alpha risk of 0.05 (bilateral hypothesis) and a power of 80%, we will need 69 evaluable patients.

Results:

The recruitment process has just begun in Caen and Rouen. Based on the population of women included in the Smith study (3), we hypothesize that there will be 11% postoperative complications at 6 months in the nonsarcopenic group and 43% in the sarcopenic group. In addition, we estimate the preoperative prevalence of sarcopenia at 66% in our population aged over 70 years (4,5).

Perspectives:

We intend to collect complementary clinical elements to identify other factors associated with sarcopenia, in order to consider an interventional preoperative physical reconditioning in a future study.

References:

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- (3) Smith AB et al. Sarcopenia as a predictor of complications and survival following radical cystectomy. J Urol 2014;191:1714–1720.
- (4) Psutka SP et al. Sarcopenia in patients with bladder cancer undergoing radical cystectomy: impact on cancer-specific and all-cause mortality. Cancer. 2014 Sep 15;120(18):2910-8.
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