Supplementary Materials

Supplementary Table S1. SARC-F Screen for Sarcopenia (https://www.physio-pedia.com/SARC-F:_A_Simple_Questionnaire_to_Rapidly_Diagnose_Sarcopenia).

SARC-F Screen for Sarcopenia: Component Question Scoring

*Strength: How much difficulty do you have in lifting and carrying 10 pounds?
- None 0
- Some 1
- A lot or unable 2

*Assistance in walking: How much difficulty do you have walking across a room?
- None 0
- Some 1
- A lot, use aids, or unable 2

*Rise from a chair: How much difficulty do you have transferring from a chair or bed?
- None 0
- Some 1
- A lot or unable without help 2

*Climb stairs: How much difficulty do you have climbing a flight of 10 stairs?
- None 0
- Some 1
- A lot or unable 2

*Falls: How many times have you fallen in the past year?
- None 0
- 1ess than 3 falls 1
- 4 or more falls 2

Data suggests that a SARC-F score of ≥4 best predicts the need for further, more comprehensive evaluation.

Supplementary Table S2. Hyperparameters of the Machine Learning Models.

For ALL Models					
Parameters	**Values**	**Parameters**	**Values**	**Parameters**	**Values**
Algorithm name	XGBoost	**Algorithm name**	Random Forest	**Algorithm name**	Light GBM
eta	0.05	**criterion**	gini	**min data in leaf**	3
gamma	0.001	**max_features**	11	**max depth**	5
max_depth	6	**min_samples_leaf**	30	**num leaves**	62
max_leaves	2	**min_samples_split**	10	**num iterations**	1000
reg_alpha	0.8333	**ntrees**	1000	**learning rate**	0.1
reg_lambda	0.9149			**bagging fraction**	0.8
subsample	0.5				
For Female Models					
Parameters	**Values**	**Parameters**	**Values**	**Parameters**	**Values**
Algorithm name	SVM	**Algorithm name**	Random Forest	**Algorithm name**	kNN
C	1.206	**criterion**	gini	**metric**	cityblock
kernel	rbf	**max_features**	11	**n_neighbors**	2
		min_samples_leaf	30	**weights**	distance
		min_samples_split	10		
		ntrees	1000		

Supplementary Table S3. Average compute time (minutes).

	Time (minutes)
XGBoost-ALL model	14.04
Random Forest-ALL model	15.57
LightGBM-ALL model	13.18
Support Vector Machine-Female Model	15.20
Random Forest-Female model	14.33
K Nearest Neighbors-Female Model	13.49

Supplemantary Table S4. Results of the Training Set

ALL Model*	LightGBM	RF	XGBoost
Accuracy	0.939	0.907	0.878
AUC	0.984	0.949	0.941
F1 score	0.934	0.882	0.869
Matthews Correlation Coefficient	0.687	0.555	0.551
Precision	0.943	0.906	0.880
Recall	0.937	0.914	0.887
Female Model*	**SVM**	**RF**	**KNN**
Accuracy	0.954	0.938	0.931
AUC	0.995	0.972	0.966
F1 score	0.930	0.946	0. 943
Matthews Correlation Coefficient	0.691	0.799	0.711
Precision	0.949	0.968	0.935
Recall	0.943	0.971	0.873

* Results of the Training Set