a

Variables
- Age (years)[1,2]
- Distance walked during the 6MWT (m)[2]
- Duration of treament (years)[1,2]
- Heart rate at the end of the 6MWT (m)[2]
- Moderate-to-vigorous leisure physical activity (min/day) [1,2]
- Sex {"m", "w"}[1]
- Weight (kg)[1, 2]

VO2 peak

n = 164

Obesity

n = 223

Variables
- Age at diagnosis (years)
- Body mass index at the end of treatment (kg/m²)
- Dexrazoxane dose (mg/m²)[3]
- Doxorubicin dose (mg/m²)
- Duration of treatment (years)
- Effective corticosteroid cumulative dose (mg/m²)
- Gestational age at birth (w)[3]
- Methotrexate dose (mg/m²)
- Radiotherapy dose (Gy)[3]
- Sex {"m", "w"}
- 166 SNPs {"0/0", "0/1", "1/1"}[4]

End of treatment

Mean: 13.85 years

Diagnosis   PETALE

End of treatment

Mean: 13.21 years

Diagnosis   PETALE

VO_2 peak (ml/kg/min)

Target

Obesity {"yes", "no"}

Target

[1] Included in our final VO_2 peak prediction model.
[2] Included in the equation of *Labonte et al.*

[3] Excluded from our final obesity prediction model following the feature selection.
[4] Only 30 SNPs remained in our final obesity prediction model following the feature selection.

b

1.

Dataset
90%   10%

Learning set   Holdout set

2.
80%   20%

Training set   Test set

Model
Random forest
XGBoost
Linear regression
GCN
GAT
Linear reg. + GGAE[5]

Feature selection[5]

Optimization method
Automated
Manual

Hyperparameter Optimization

Training

Score

4.

Final test

Training

Optimization method
Automated
Manual

Hyperparameter Optimization

Feature selection[5]

3.

Analysis of models → Selection of model

[5] Only in the obesity prediction task