What does BIA measure? And what does it estimate?	• BIA measures the electrical response of the body to an electric current applied by single- or multifrequency devices • It estimates TBW, FFM, and FM or other parameters using SF-BIA and MF-BIA predictive equations
How to choose the right device?	• Choose a device that also provides raw bioimpedance measurements as outputs (e.g., resistance, reactance, and impedance) in addition to the body composition parameters
How do you select an equation to estimate body composition?	• Ideally, equations should match: - the characteristics of the population being evaluated (e.g., age, sex, sexual maturation, ethnicity, health status, obesity degree) - the device being used (e.g., brand, model/version, frequency, whole-body or segmental, supine/standing)
If available equations are not population-specific or device-specific, how to proceed?	• Perform a cross-validation study • Choose a reference standard measuring body composition at the same level (e.g., multicompartment, DXA, dilution method) • Use agreement analysis to evaluate the validity of the selected equations. A guide is provided in Earthman (4) • If agreement analysis is not satisfactory, develop a new equation and test its external validity using an external sample or the bootstrapping method
What alternatives to body composition assessment exist when using BIA?	• Raw BIA measurements can be used, such as resistance, reactance, and impedance • These measurements can be adjusted by height or used to compute BIA parameters, including phase angle, impedance ratio, and BIVA
What protocol to follow?	• We advise following the guidance provided by Lyons-Reid et al (11) and Brantlov et al. (12) until a standard protocol for the pediatric population is established; or, if available, the study protocol by the device's manufacturer • Use the same protocol for all subjects and during all follow-up visits • When deviations from the recommendations are necessary, record modifications and report them in future publications