Supersymmetry (SUSY) provides elegant solutions to several problems in the Standard Model, and searches for SUSY particles are an important component of the LHC physics program. The direct production of electroweak SUSY particles, such as sleptons, charginos, and neutralinos, is a particularly interesting area with connections to dark matter and the naturalness of the Higgs mass. This talk will present results from searches for electroweak SUSY partners using 139/fb of pp collision data collected with the ATLAS experiment in Run 2 at the LHC. Several signatures are employed, and the results of the searches interpreted as constraints on a variety of SUSY models, including the first constraint from ATLAS on direct non-degenerate stau production.