ECG of a 25-year-old woman presents with palpitations and dizziness during exercise.

QUESTION 1: Which ONE of the following is the best ECG diagnosis?

1. Sinus tachycardia with right bundle branch block and ventricular bigeminy.
2. Pre-excited atrial fibrillation.
3. Polymorphic ventricular tachycardia.
4. Bidirectional ventricular tachycardia.
5. Sinus tachycardia with alternating left anterior and posterior fascicular block.

The patient is not taking any chronic medication and has a normal general and cardiovascular examination.

QUESTION 2: What is the resting 12-lead ECG likely to show?

1. Brugada pattern
2. Long QT interval
3. “Normal” ECG
4. Early repolarisation (J wave) pattern
5. Delta waves (Wolff-Parkinson-White pattern)

Please analyse the ECG carefully and commit yourself to an answer before checking the explanation.