First, the sinoatrial node fires as normal; the impulse travels through both the AV node and the accessory pathway. Pre-excitation is the phenomenon of seeing some of the ventricle, triggered by the accessory pathway, start to depolarize before the bulk of it; this causes a delta wave.

Then, an accessory pacemaker – some random atrial ectopic – fires a premature P wave, a premature atrial impulse. The accessory pathway is still in the refractory period, because it had just conducted a proper sinoatrial impulse. So it cannot conduct the ectopic premature impulse just yet. This impulse can only be conducted through the AV node.

The ectopic impulse, conducted through the AV node and the ventricle, takes its time to get back to the reentry circuit area: but the time it gets there, the accessory pathway is no longer refractory and can now be excited again. The same for the atrium. The sinoatrial node hasn’t fired yet – all this business happens between beats. So the re-entering impulse can once again be conducted via the atria to the AV node, and then to the ventricles, thereby setting up a whole separate (and faster) rhythm.

With the conducting system in revolt, the sinoatrial node struggles for control, still firing regularly – but its impulses meet a useless refractory atrial wall, and so its commands are rudely ignored.

Atrial Flutter with 2:1 conduction can sometimes look like SVT; adenosine reveals its true nature. It is usually a large circuit, around the tricuspid valve.

AV nodal reentrant tachycardia: The AV node is normally a one-way street, but in this instance, it becomes two pathways: one fast, one slow. The slow pathway conducts the impulse to the beginning of the fast pathway; by the time the impulse got there, the beginning of the slow pathway is already ready to receive an impulse. The fast pathway conducts the impulse back up into the beginning of the slow pathway. And so it continues.

"Orthodromic" AV reentrant tachycardia
If you have an accessory pathway, this is your tachycardia. The impulse travels just like in the pictures above: from atrium, to AV node, to ventricles, and back to the atrium via the accessory pathway. Antidromic tachycardias follow the opposite route: to the ventricles via the accessory pathway, then to the AV node, and then back to the atrium. The QRS complex in these is typically broad, and therefore very similar to a proper ventricular tachycardia.