

FIGURE 276-1 Right atrial anatomy pertinent to normal sinus rhythm and supraventricular tachycardia. **A.** Typical P-wave morphology during normal sinus rhythm based on standard 12-lead electrocardiogram. There is a positive P wave in leads II, III, and aVF; biphasic, initially positive P wave in V₁; and negative P wave in aVR. **B.** Right atrial anatomy seen from a right lateral perspective with the lateral wall opened to view the septum. AVN, atrioventricular node; CS Os, coronary sinus ostium; FO, fossa ovalis; IVC, inferior vena cava; SVC, superior vena cava; TVA, tricuspid valve annulus.

TABLE 276-2 COMMON CAUSES OF PHYSIOLOGIC SINUS TACHYCARDIA

1. Exercise
2. Acute illness with fever, infection, pain
3. Hypovolemia, anemia
4. Hyperthyroidism
5. Pulmonary insufficiency
6. Drugs that have sympathomimetic, vagolytic, or vasodilator properties, e.g., albuterol, theophylline, tricyclic antidepressants, nifedipine, hydralazine
7. Pheochromocytoma

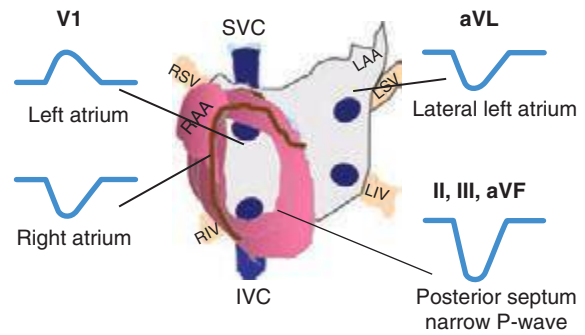


FIGURE 276-3 Location of focal atrial tachycardia focus estimated by P-wave morphology. LAA, left atrial appendage; LIV, left inferior pulmonary vein; LSV, left superior pulmonary vein; RAA, right atrial appendage; RIV, right inferior pulmonary vein; RSV, right superior pulmonary vein; SVC, superior vena cava.

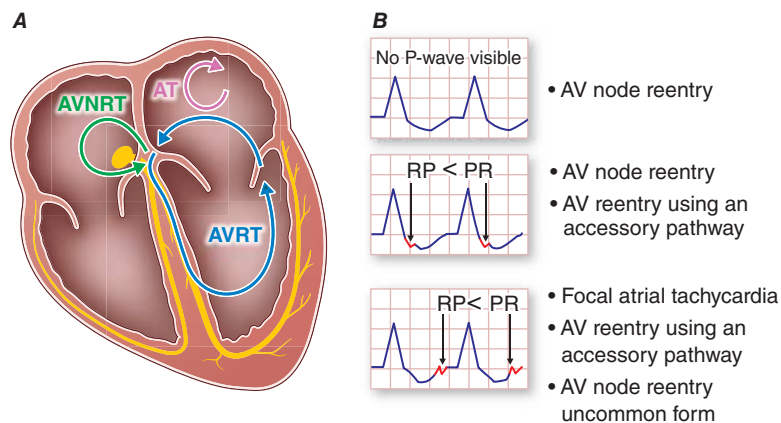


FIGURE 276-2 Common mechanisms underlying paroxysmal supraventricular tachycardia along with typical R-P relationships. **A.** Schematic showing a four-chamber view of the heart with atrioventricular node in green and an accessory pathway between the left atrium and left ventricle in yellow. Atrial tachycardia (AT; red circuit) is confined completely to atrial tissue. Atrioventricular nodal reentry tachycardia (AVNRT; blue circuit) uses atrioventricular (AV) nodal and perinodal atrial tissue. Atrioventricular reentry tachycardia (AVRT; black circuit) uses atrial and ventricular tissue, accessory pathway, AV node, and specialized conduction fibers (His-Purkinje) as part of the reentry circuit. **B.** Typical relation of the p wave to QRS, commonly described as the R-P to P-R relationships for the different tachycardia mechanisms.