Adenosine is an endogenous nucleoside with antiarrhythmic activity. Because of its short plasma half-life, the clinical effects occur rapidly and are very brief. It produces a transient depression of the SA node and AV node activity.

Indications and Administration:

1. Stable, narrow complex, regular tachycardia.
    a. **Adult -** 6 mg rapid IV push followed immediately by 10-20 ml rapid saline flush. If the tachycardia persists 12 mg may be given after 1-2 min. Total dose not to exceed 30 mg.
    b. **Pediatric -** 0.1 - 0.2 mg/kg not to exceed 6 mg rapid IV push followed immediately by 5-20 ml rapid saline flush. If the tachycardia persists the initial dose may be doubled, not to exceed 12 mg, and given after 1-2 min. Total dose not to exceed 2.5 times the initial dose.
2. Unstable, narrow complex, regular tachycardia, while cardioversion is being prepared.
    a. Same dosing as above.
3. Stable, regular, monomorphic, wide complex tachycardia.
    a. Same dosing as above.

Notes:

1. Adverse effects include flushing, dyspnea, chest pain and hemodynamic disturbances, all of short duration. Warn patients to expect a brief sensation of chest discomfort.
2. Establish an anticubital IV. The dose of adenosine has been calculated for this location.
3. If the patient initially converts with adenosine then reverts to the original dysrhythmia, additional doses are indicated.
4. Caffeine and theophylline antagonize adenosine's effects. Larger doses may be required.
5. Tegretol (Carbamazepine) can prolong the depression of nodal activity caused by adenosine.
6. Hemodynamically stable wide complex tachycardia is more likely to be ventricular tachycardia than SVT with aberrancy.