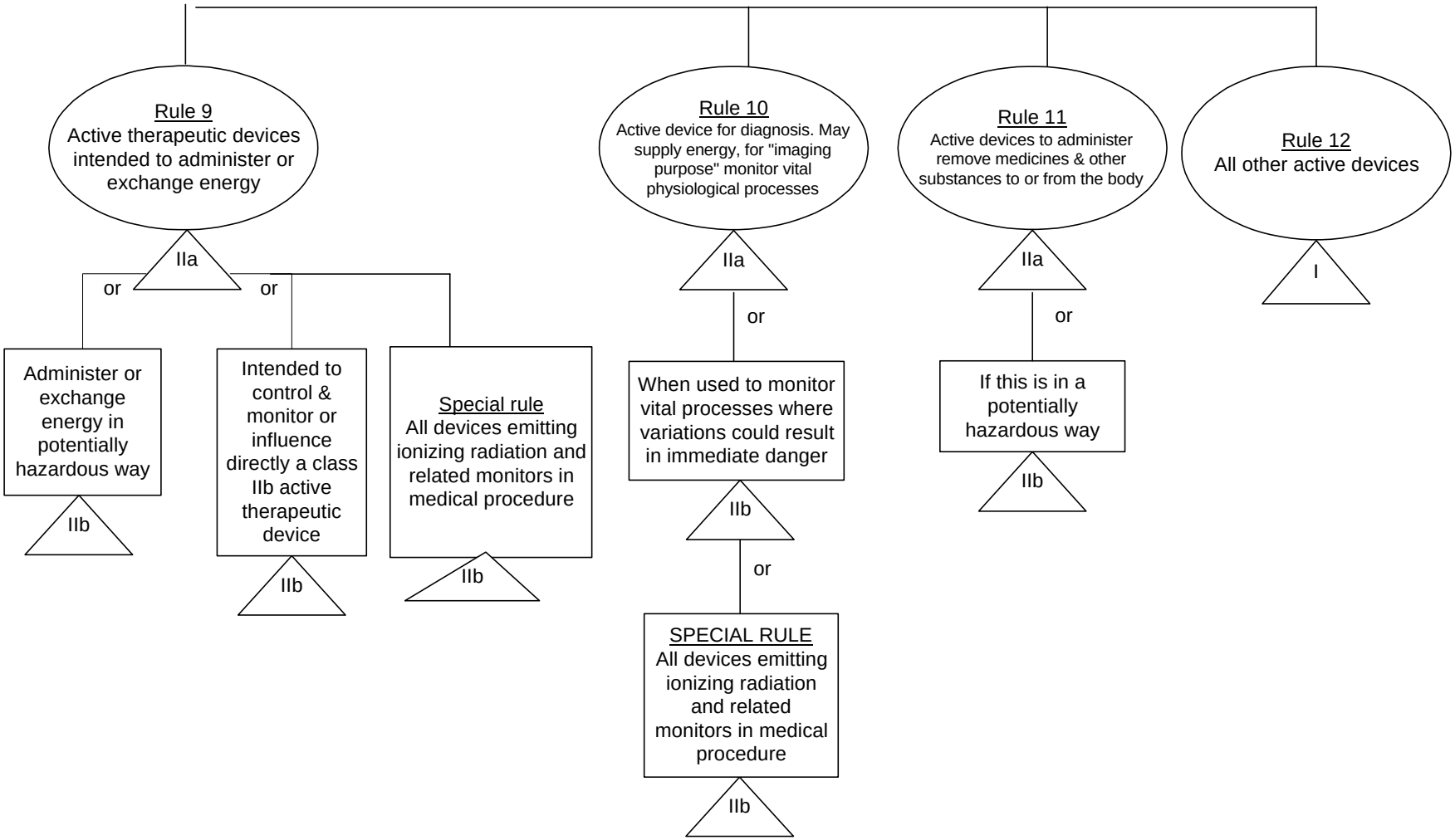ACTIVE DEVICES