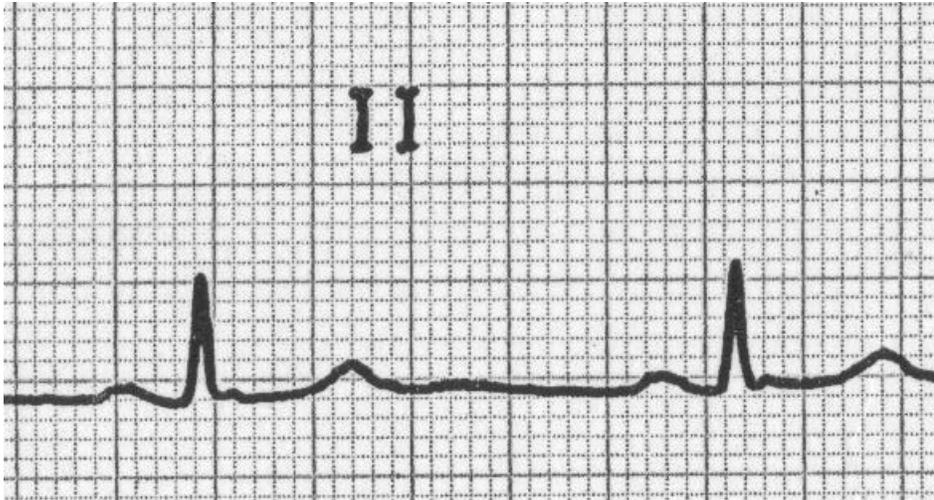
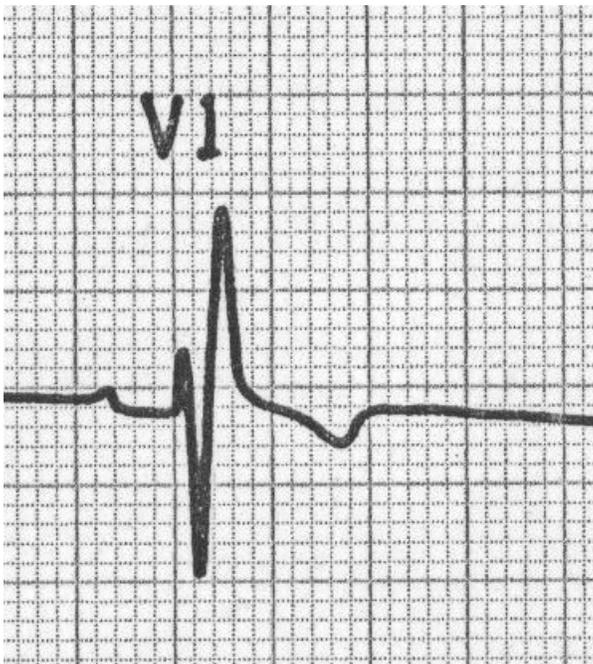


Always Make Your Diagnosis with a 12-Lead ECG

NEVER Use a Rhythm Strip for Diagnosis!



Look at the QRS complex here? Wide... or narrow? This is Lead II. Let's look at Lead V1 from the same ECG tracing:



Not what you probably expected, is it? The QRS in Lead II is just as wide as the QRS in Lead V1. The problem is: you can't see all of it.

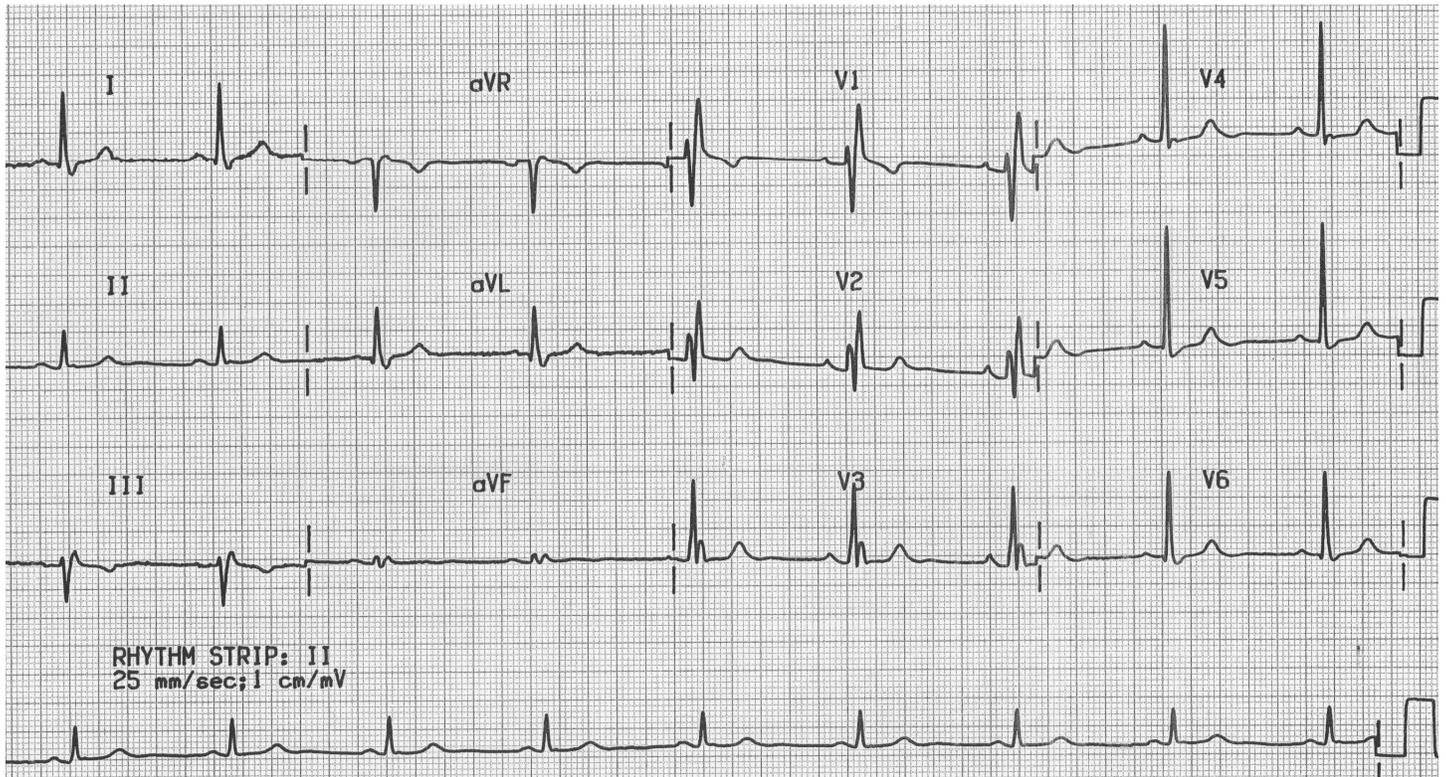
Every deflection on an ECG tracing is a **vector**. In fact – that's *all* the ECG machine records – just vectors: electrical impulses traveling *toward* or *away from* a recording electrode.

When the depolarization vector, which the QRS represents, travels directly toward the electrode, it inscribes a tall, positive deflection. If it is traveling away from the electrode, it inscribes a deep negative deflection. Traveling at angles to the recording electrode results in positive or negative deflections of varying and intermediate sizes.

But when the vector travels *perpendicularly* to the recording electrode, it records **no net deflection** – no positivity or negativity! And that is exactly what has happened here in this

example. The terminal forces of the depolarization vector turned perpendicular to the Lead II recording electrode and all that was inscribed was a very small positive "blip" that could easily be overlooked.

The moral of this story is: always make your diagnosis from a 12-lead ECG. Rhythm strips are for monitoring or later analysis. Here is the full 12-lead ECG (my ECG collection has many, many similar examples):



Would you have recognized Lead V4 as a wide complex? Probably not. And I doubt that I would have, either. *But I certainly would have insisted on a 12-lead ECG before making any diagnosis.*

Check my website periodically for announcements regarding live, private tutorials via ZOOM. I will discuss anything related to ECG interpretation – basic, intermediate, or advanced. The tutorial/consultation session will last for one hour. This has been a very successful approach. As the holiday season gets underway, I will have less time so visit my website to learn more.

<https://medicusofhouston.com/online-private-tutorial-sessions/>

You can access the private tutorial page from my home page by clicking on COURSES in the navigation bar and then click on ONLINE PRIVATE TUTORIAL SESSIONS.

Stay safe, everyone.

Come join us and be a *PARTICIPANT*... never just an audience!