

# ■ Diagnostics' Role In Medicine Today

## OVERVIEW

---

**Diagnostics' Role In Medicine Today** introduces the ever-expanding molecular diagnostics industry. Diagnostics save lives by helping pinpoint the disease's exact cause and location. Learn the purpose of each diagnostic, the science behind personalized medicine, and how companion diagnostics help doctors prescribe medication and dosage correctly the first time. If you are new to this area of healthcare, Diagnostics' Role in Medicine Today provides a solid foundation to build your diagnostic acumen.

### Five Takeaways:

1. Cite how biomarkers are used in molecular diagnostics.
2. Describe the qualitative and quantitative measurements used by diagnostics to assess disease.
3. Identify the main purposes of each diagnostic category.
4. Explain how companion diagnostics take advantage of a patient's genetic variation.
5. Connect diagnostics to improved disease treatment through personalized medicine.

## AGENDA

---

### Defining Diagnostics

Qualitative measurements  
Quantitative measurements  
Single and multiple measurements  
Biomarker measurements  
Diagnostic screening and diagnosis  
Diagnostic drug selection  
Diagnostic treatment monitoring  
Diagnostic management

### Types of Diagnostics

General chemistry  
Immunochemistry  
Hematology  
Cytology  
Microbiology  
Infectious disease  
Anatomic imaging  
Molecular

### Companion Diagnostics

Genetic variation concepts  
Genetic basis of disease  
Monogenetic disease  
Polygenetic disease  
Diagnostics and selecting a treatment  
Focus On: HER2 cancer and Herceptin diagnostic  
Customizing therapy: treatment selection  
Customizing therapy: dosage selection

