

Prospective Health Care

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Contemporary Practice of Medicine

- Disease oriented
- Find it, fix it
- Reactive
- Sporadic intervention
- Physician-directed
- Not Standardized
- Not Personalized

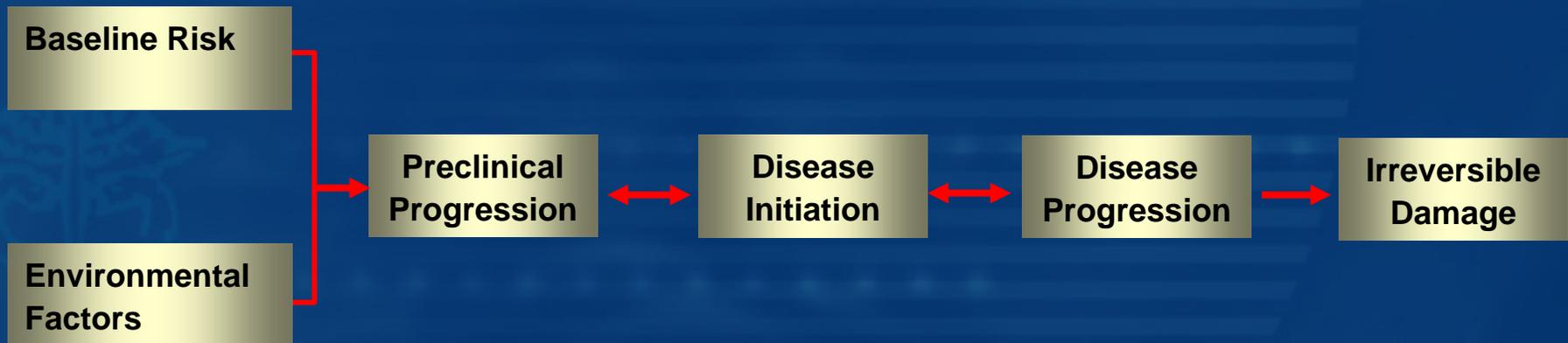
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Concepts of Disease

Reductionism: Single factor (20th Century)



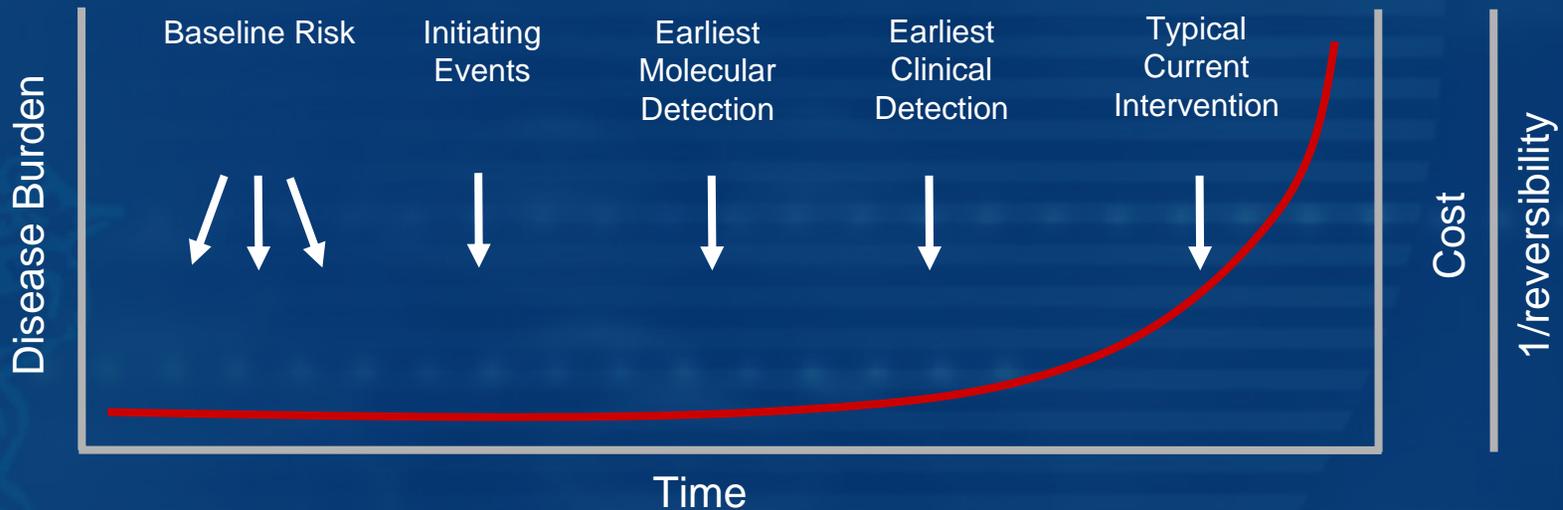
Emergence: Multiple factors (21st Century)



PROSPECTIVE HEALTH CARE

Opportunities in Chronic Disease

Health Care Cost vs. Disease Progression



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Research Impacting Medicine Today

- Genomics
- Proteomics
- Metabolomics
- Medical technologies
- Informatics
- Risk Prediction

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Tools Needed for Prediction and Personalized Care

Decision Support Tools:

Assess Risk

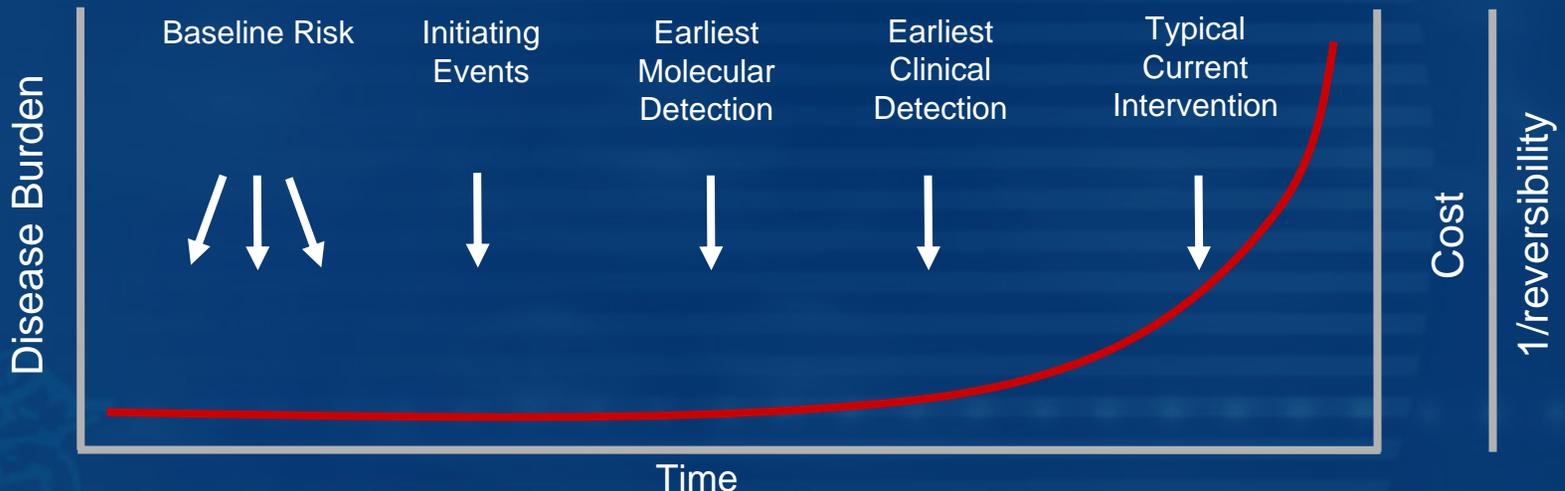
Refine Assessment

Predict/Diagnose

Monitor Progression

Predict Events

Inform Therapeutics



Baseline Risk

Preclinical Progression

Disease Initiation and Progression

Therapeutic Decision Support

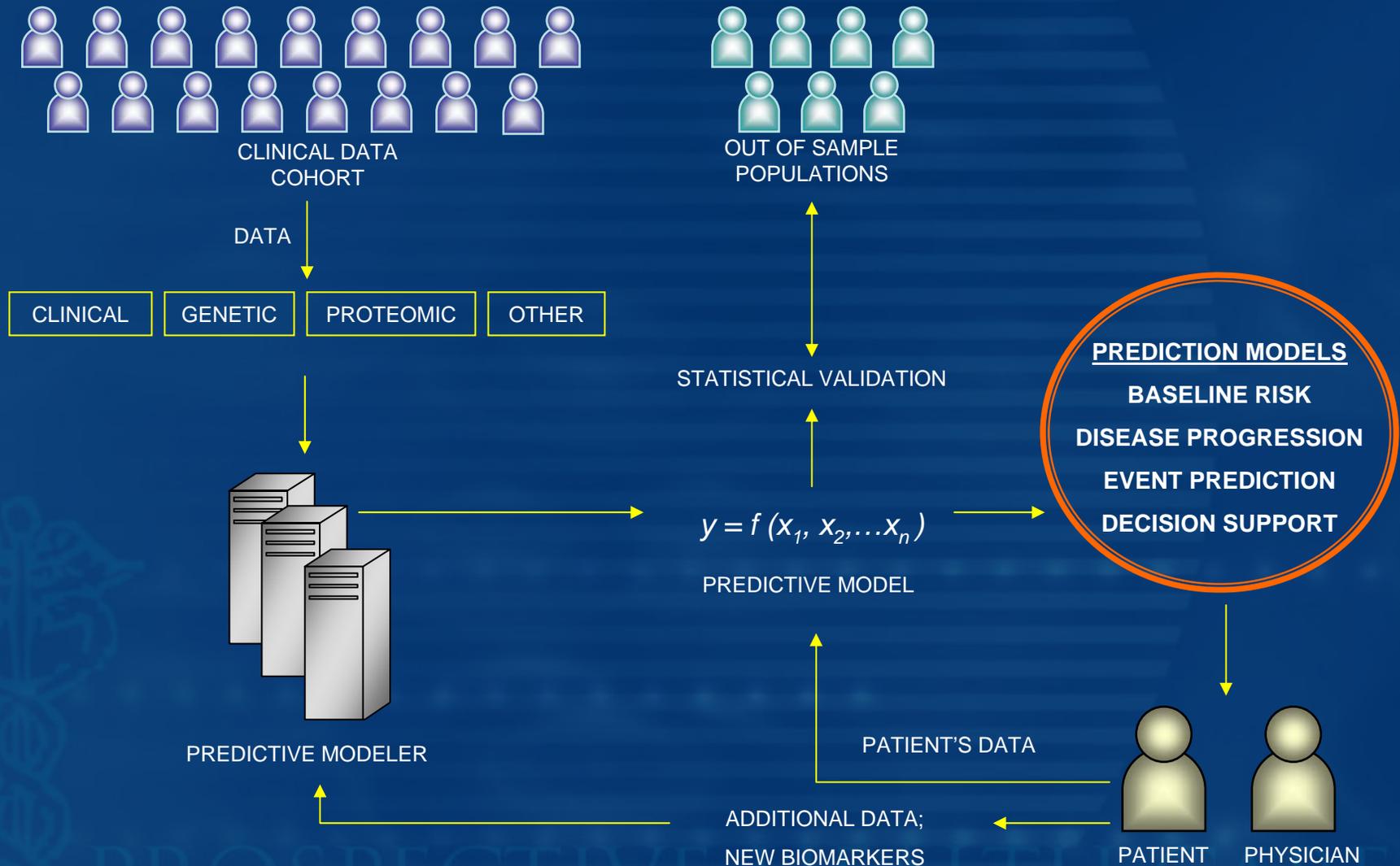
Sources of New Biomarkers:

Stable Genomics:
Single Nucleotide Polymorphisms (SNPs)
Haplotype Mapping
Gene Sequencing

Dynamic Genomics:
Gene Expression
Proteomics
Metabolomics
Molecular Imaging

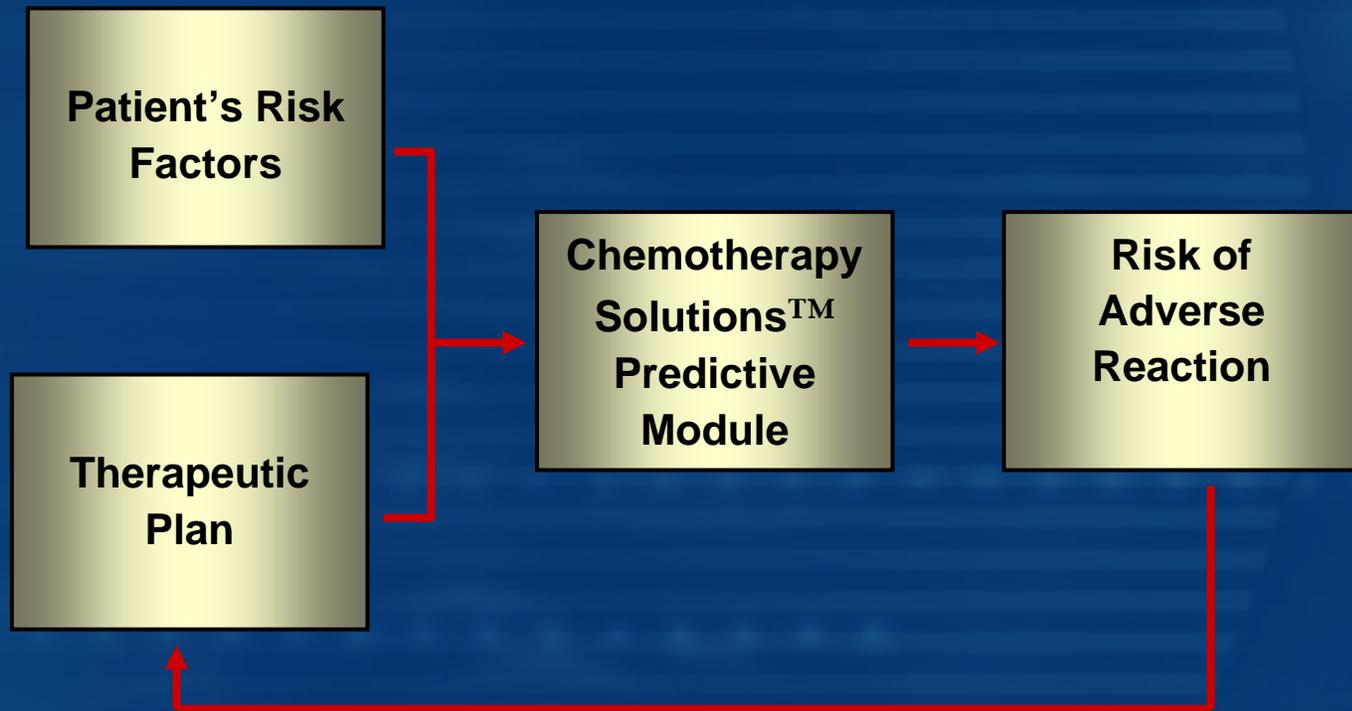


Risk Model Development



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Risk Prediction Module for Cancer Chemotherapy



PROSPECTIVE HEALTH CARE

Key Obstacles to Prospective Care

- Medical Reimbursement
- Uncoordinated Clinical Delivery Systems
- Lack of Medical Provider Know-How; Culture
- Public Understanding and Motivation
- Technical Capabilities

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