

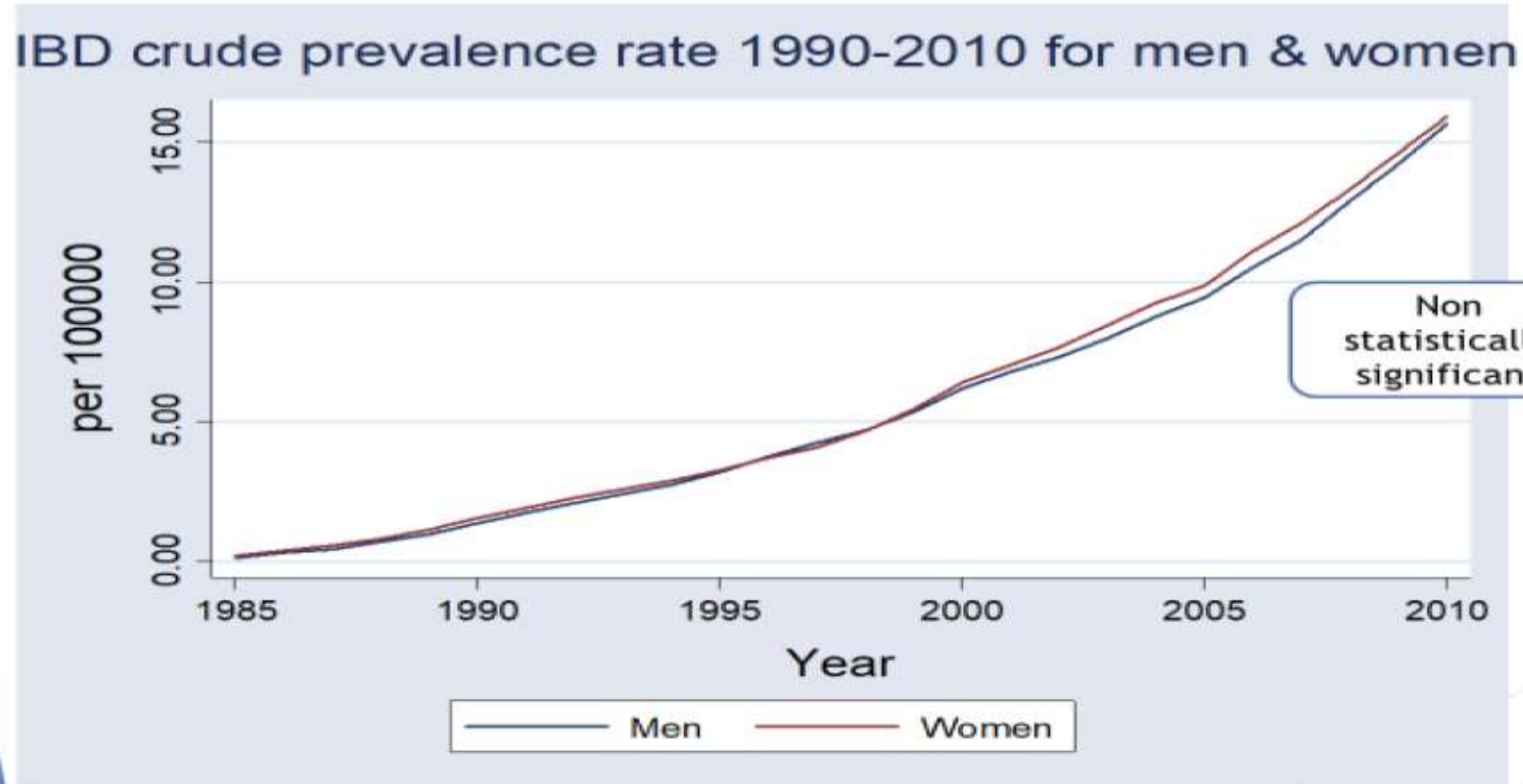
IBD

A major Challenge for Iranian
Gastroenterologist

Inflammatory Bowel Disease, A Growing Global Problem

| Country | Annual incidence | prevalence |
|---|---|---|
| North America | UC: 19.2/100,000 person-year CD: 20.2/100,000 person-year | UC: 502/100,000 CD: 322/100,000 |
| European countries | UC: 8.2/100,000 person-year CD: 5.4/100,000 person-year | UC: 2.4-294/100,000 CD: 1.5-213/100,000 |
| Asia-pacific crohn's & colitis epidemiology | UC: 0.8/100,000 person-year CD: 0.5/100,000 person-year | |
| Iran | UC: 2.7/100,000 person-year CD: 0.4/100,000 person-year IBD: 3.11/100,000 person-year | UC: 35.52/100,000 CD: 5.03/100,000 IBD: 40.67/100,000 |

Increasing IBD in Iran







~1.6 million

Americans have IBD²

● Inflammatory Bowel Disease (IBD)¹

- ✓ Chronic intestinal inflammation
- ✓ No known cause
- ✓ No cure



At lest 50,000 Iranian have IBD



\$9.9 Billion^{4,5}

Direct and
indirect costs



Substantial Burden⁶⁻¹⁰

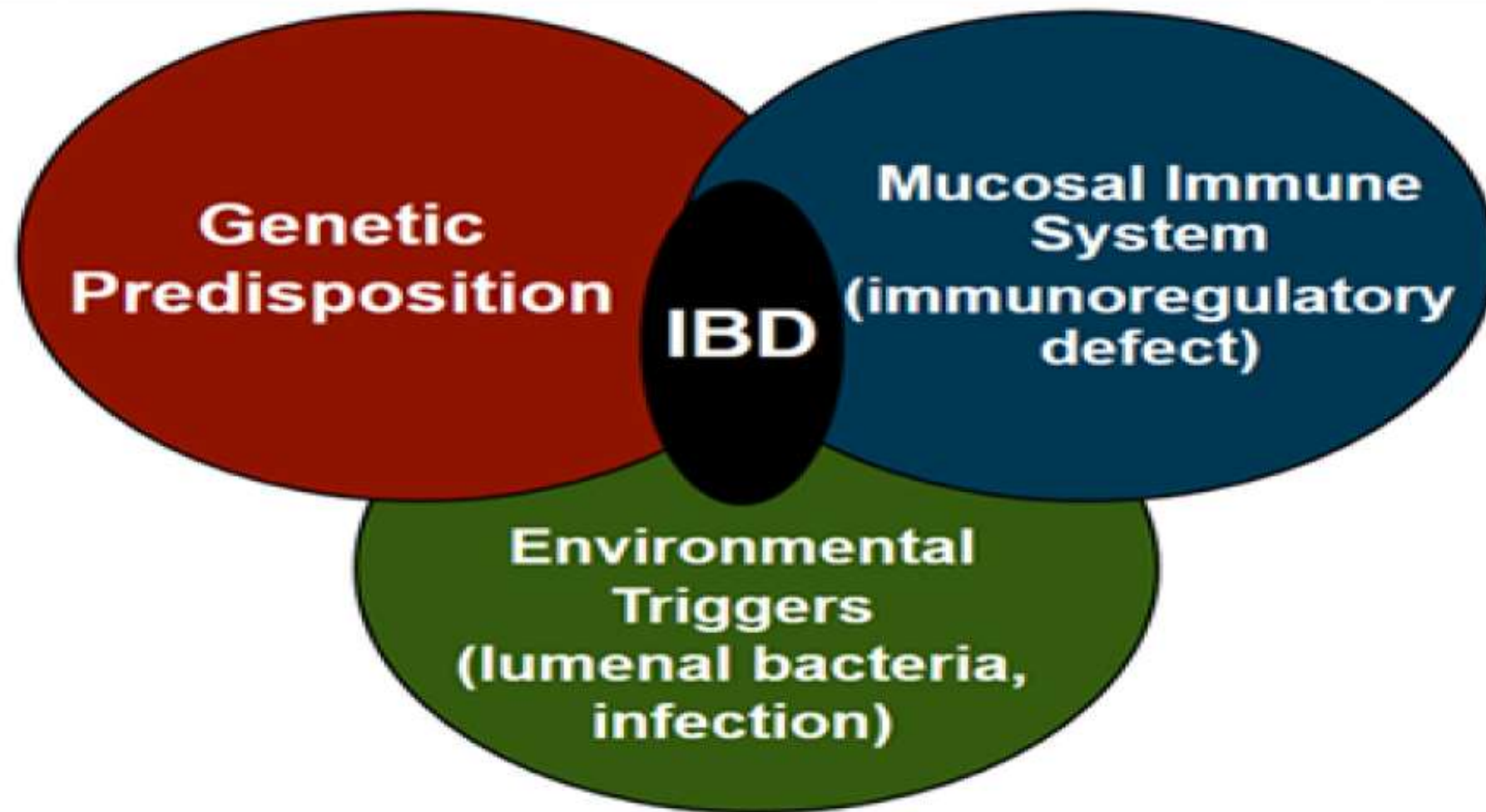
- ✓ Increased morbidity and mortality
- ✓ Reduced labor productivity
- ✓ Social stigma
- ✓ Increased cancer risk
- ✓ Impaired quality of life
- ✓ Increased medical costs
- ✓ Difficulty with physical intimacy
- ✓ Limited choices in career and travel
- ✓ Reduction in ability to work
- ✓ Reduction in leisure time

When does it all start?

- **Early life events and childhood exposures may be important in determining the risk of IBD:**
 - Increasing incidence of IBD in very young children
 - Increasing incidence of IBD in the 2nd generation of immigrants coming from low to high-incidence areas
 - C-section, exposure to antibiotics in childhood and pregnancy, etc increases risk later in life



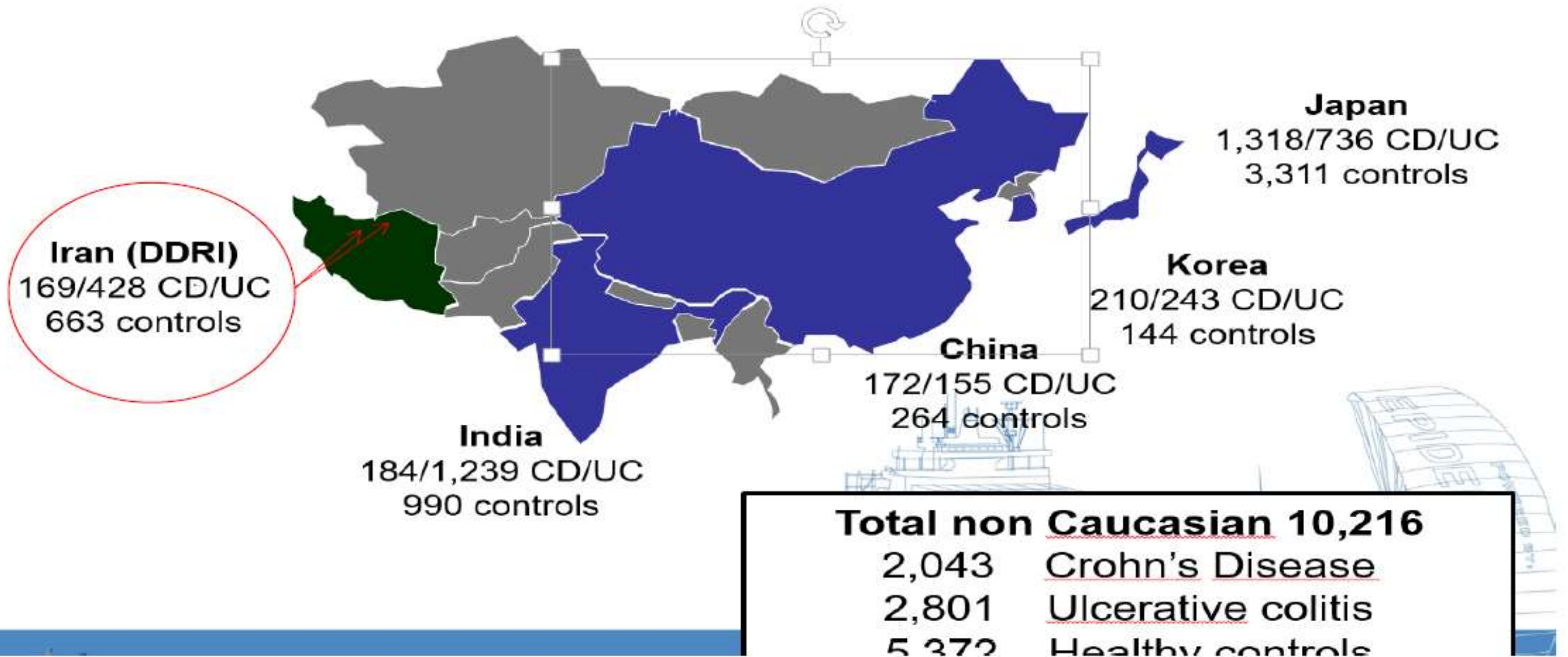
Etiologic Theories in IBD



Dysbiosis and IBD

- A new understanding of how composite genes (metagenome) and metabolic products (metabolome) of bacteria mediate mucosal homeostasis in the gut and how alterations of this composition and metabolic function contribute to aggressive immune responses in IBD and experimental colitis.
- The potential role of fungi has been and viral communities are altered in IBD and could aberrantly interact with potential bacterial pathogens.

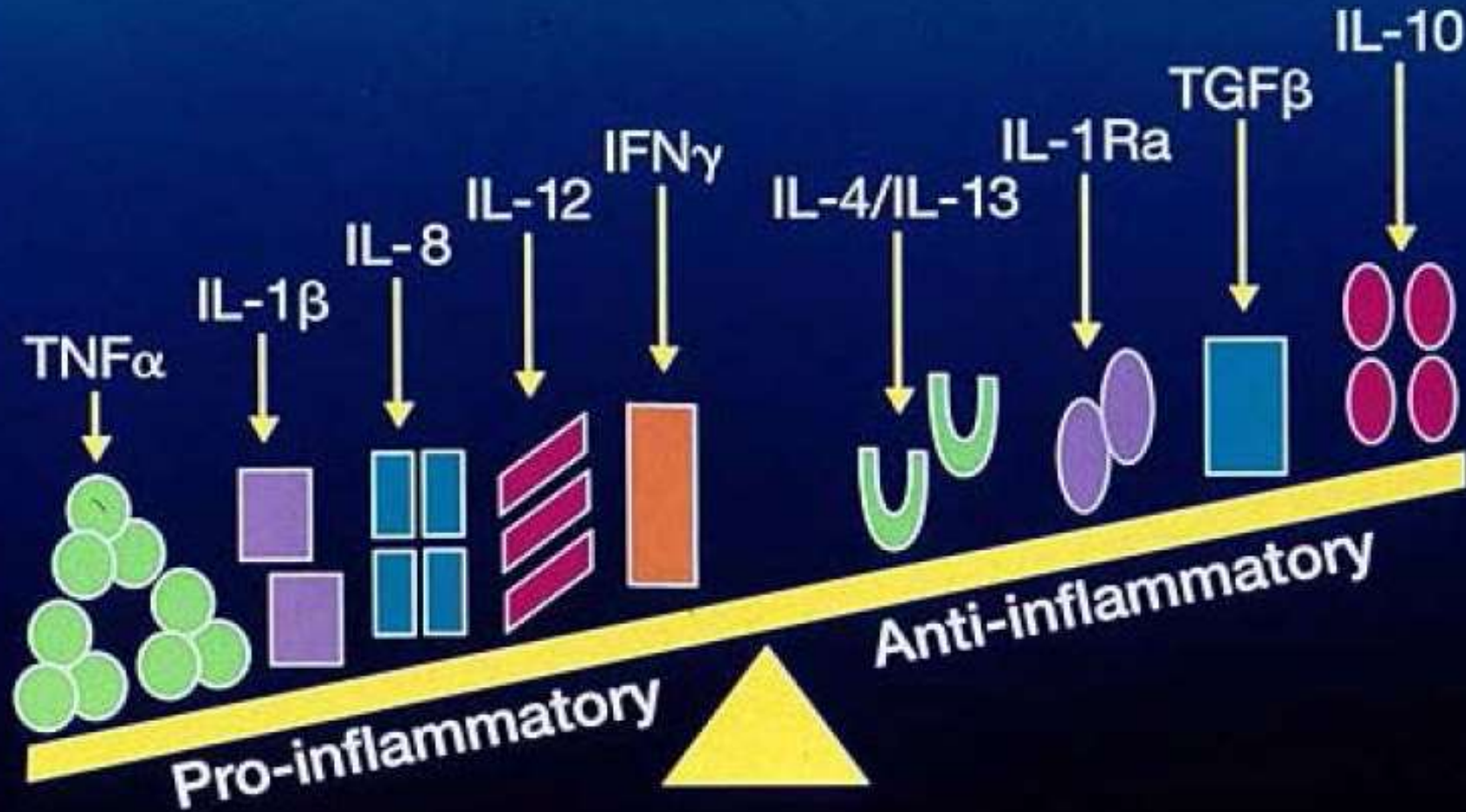
Trans-Ethnic Working Group



Pervasive sharing of genetic risk factors and similarity of phenotypes in Iranian too,

- ❑ Largest Genetic Study in non-European IBD patients,
- ❑ >20 novel IBD genes identified,
- ❑ Pervasive sharing of genetic risk factors in Iranian too,
- ❑ Relative contribution of genes can vary between Iranian and others, specially genes associated with autophagy & innate immunity in CrD.
- ❑ Clinical relatively similar phenotypes,

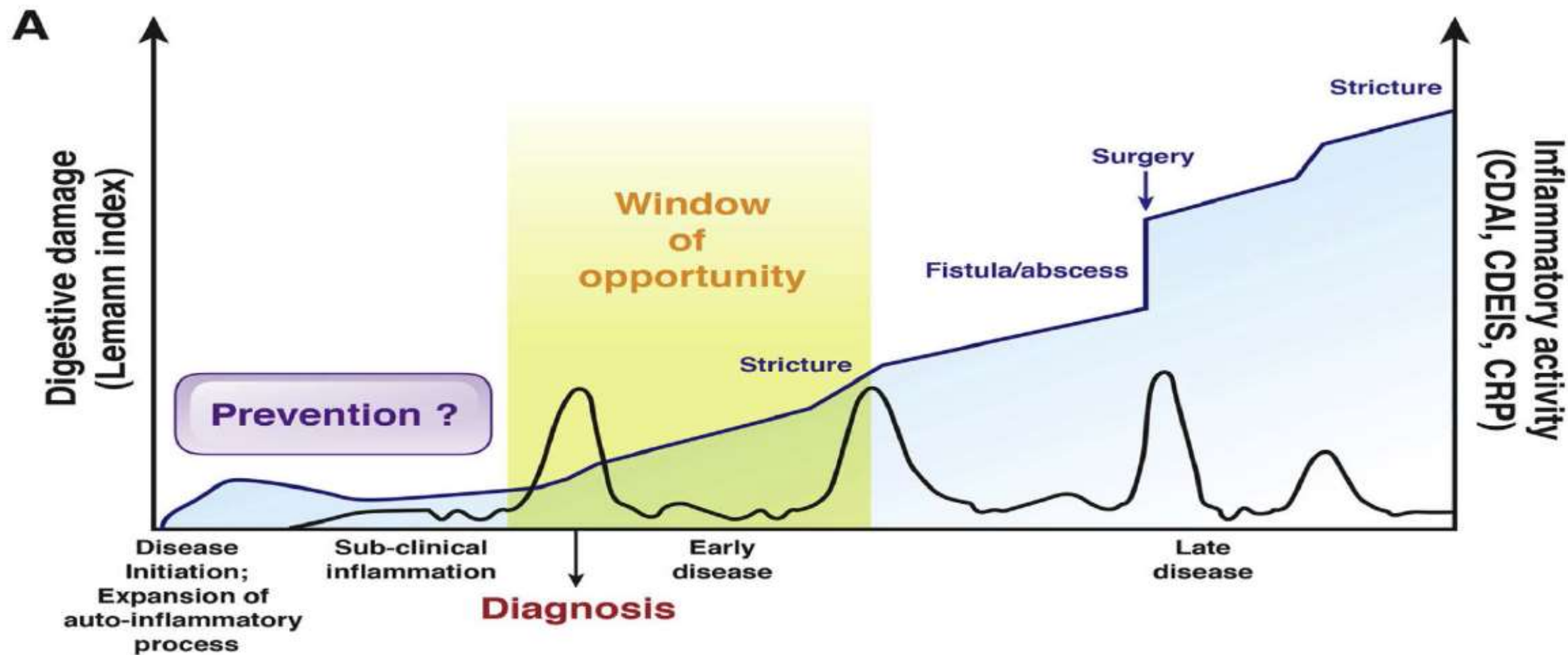
Chronic Inflammation: Imbalance Between Mediators



Our Shortcoming

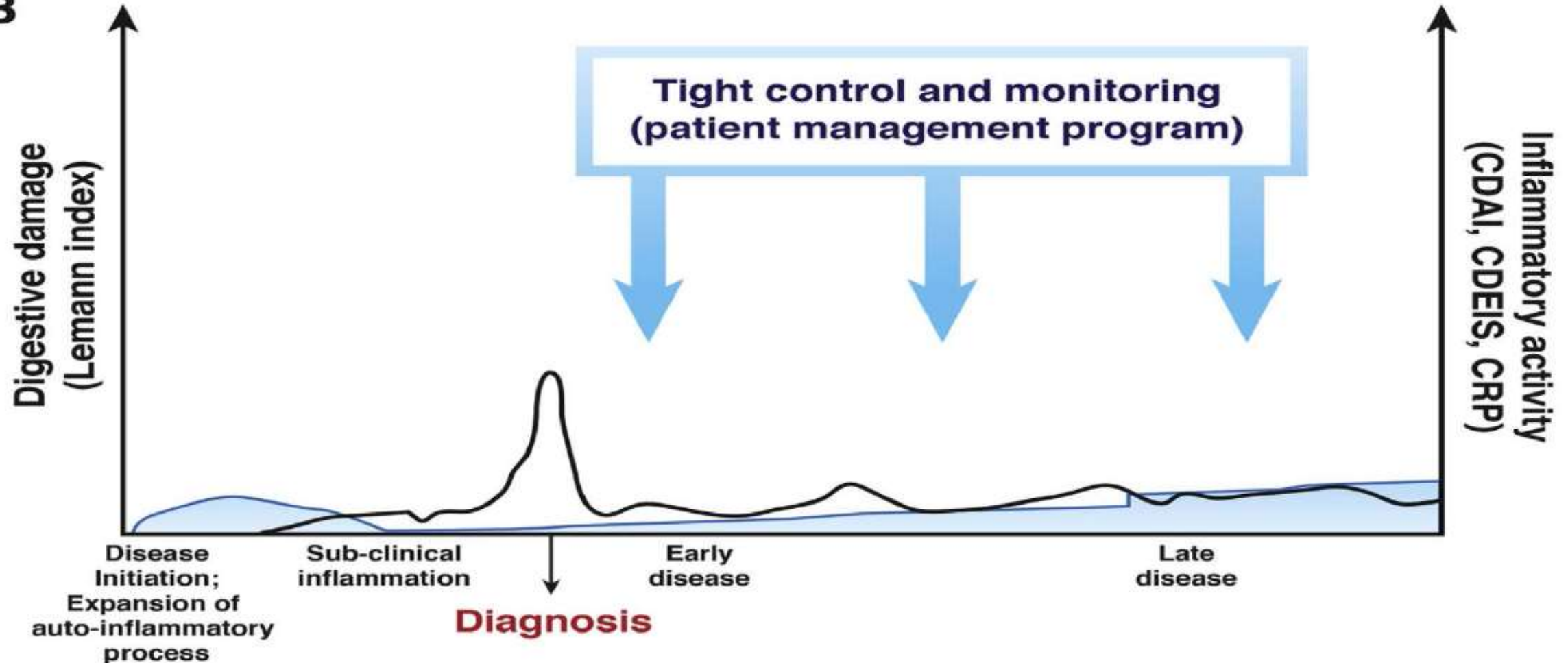
- Not optimizing therapies.
- Treating too late.
- Allowing Immunogenicity.
- Using ineffective drugs.
- Not fully inducing remission.
- Using 5ASA in Crohn's

Detection and treatment of IBD before symptoms.



Early effective treatment during this window of opportunity could slow disease progression and prevent damage.

B



Modern Goals of IBD Management¹⁷⁻¹⁹

Induction of Clinical Remission

- ✓ Turning "off" the inflammation
- ✓ Feeling well
- ✓ Normalization of laboratory parameters, growth, development, and nutrition

Maintenance of Clinical Remission



- ✓ Stable disease control and optimization of therapy
- ✓ **NO STEROIDS**
- ✓ Prevention of relapse over time (sustained and durable)
- ✓ Changing the natural course of the disease

Disease Monitoring, Prevention

- ✓ Monitoring for early relapse
- ✓ Monitoring therapies
- ✓ Prevention of infections
- ✓ Cancer prevention

New concepts have emerged in the management of IBD such as:

- **Treat to target.**
- **Early intervention,**
- **Tight control**
- **Disease monitoring.**
- **Personalization .**
- **Prevention.**

