

Changing Market Conditions; Cytyc's Impact on Women's Health

Medical Development Group (MDG)
October 4, 2006

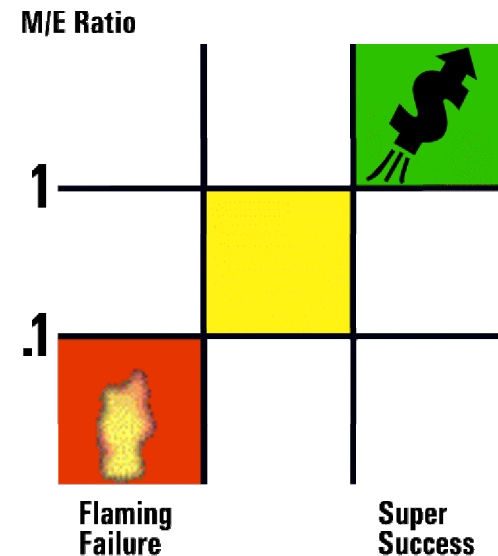
Ralph E. Grabowski
marketingVP

57 Sunset Rock Road
Andover, MA 01810-4828
978-470-3930

ralph@marketingVP.com

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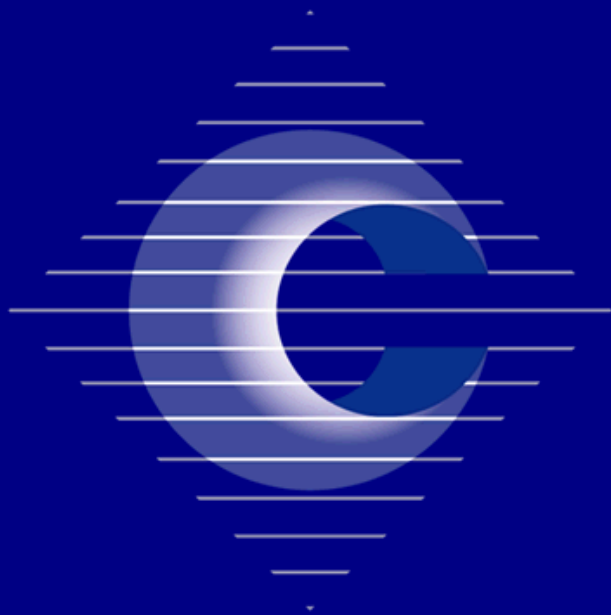
fact-gathering, analytical Marketing to steer the enterprise™



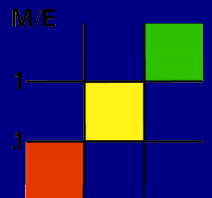
Cytec

Tools to anticipate and respond to change

- Startup to \$3.65 Billion
- 65% more disease detection for women
- "The biggest advance in 50 years"
 - Mark Schiffman, National Cancer Institute

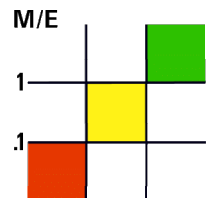
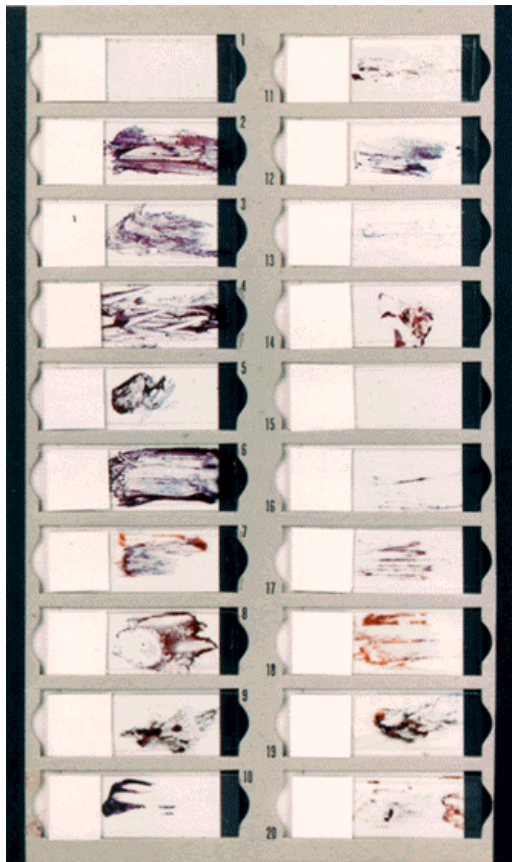


C Y T Y C
c o r p o r a t i o n



Pap smear screening – microscope slides

Before, variable



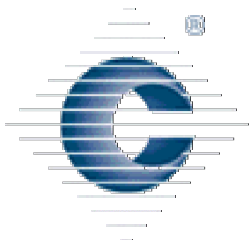
Before –
clumps, debris,
>50% false negative (error)

← Abnormal



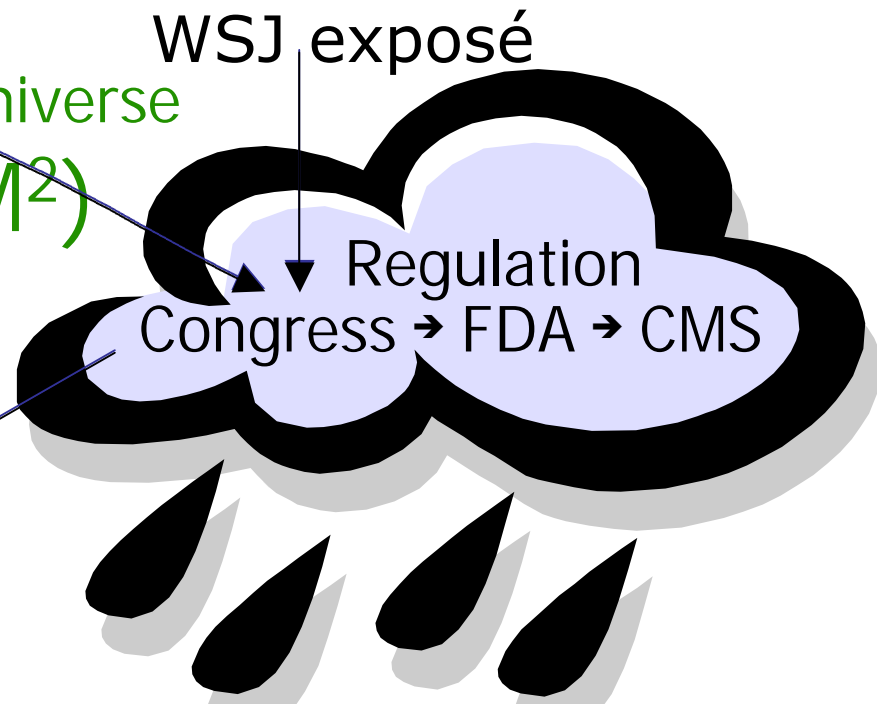
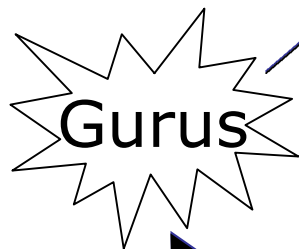
M/E		
1		Green
.1	Yellow	
	Red	

Woman



M/E		
1		Green
.1	Yellow	
	Red	

Structure of the entire complex universe Market Macrocosm™ (M²)



HPV cure ?
Gardasil® vaccine

Cytoc ThinPrep®

- Market segment ↓ Girl
- Market segment ↓ Woman
- Market segment ↓ Doctor ← 3rd party payer
- Market segment ■ Clinical laboratory (Pathologist)
- ↑ Cytologist schools (quantify!)
- ↑ Consumables



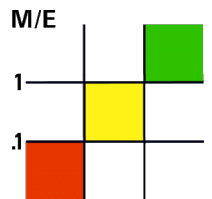
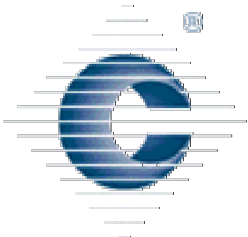
Machine vision
Competition

M/E		
1		
.1		

Front-end Market Research

Leads to profound product changes

- Cytyc's Market Research in testimony before Congress
 - While the entrepreneur still in his basement
 - 65% of schools closed, 30% fewer Cytologists/year
 - Clinical Lab Improvement Amendments (CLIA), PL 100-578
- 6 week payback(!), market sizing compel VC funding
- Identified the real customer problem
 - "... quality of the smear ..."



Initial machine vision system

- Identified the real customer problem
 - "... quality of the smear ..."



M/E		
1		■
.1	■	■

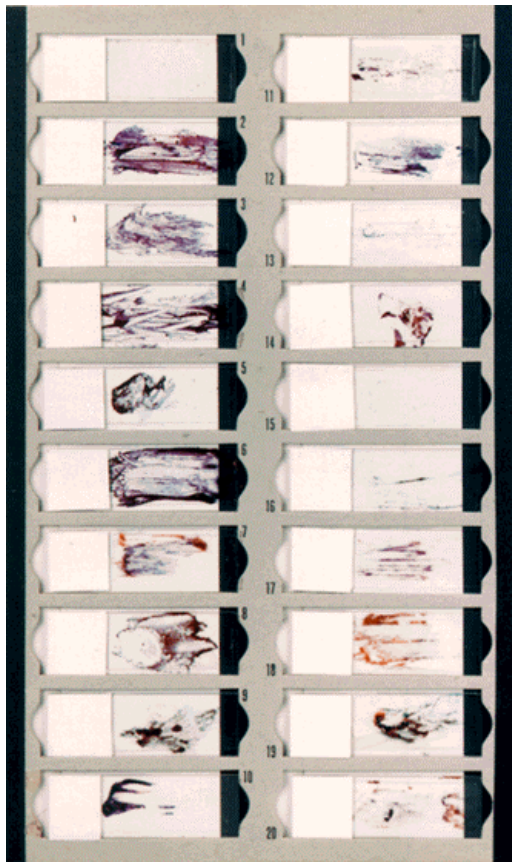
ThinPrep[®] slide processor



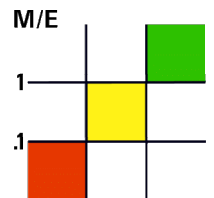
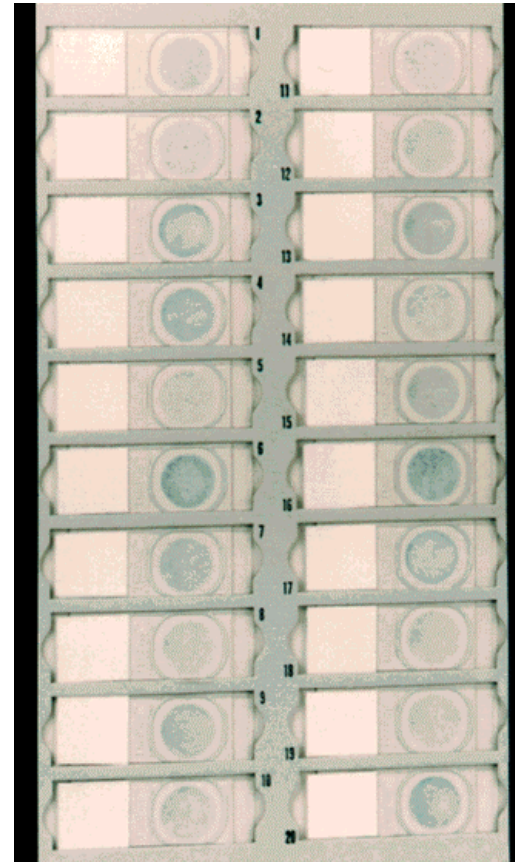
Profound product changes

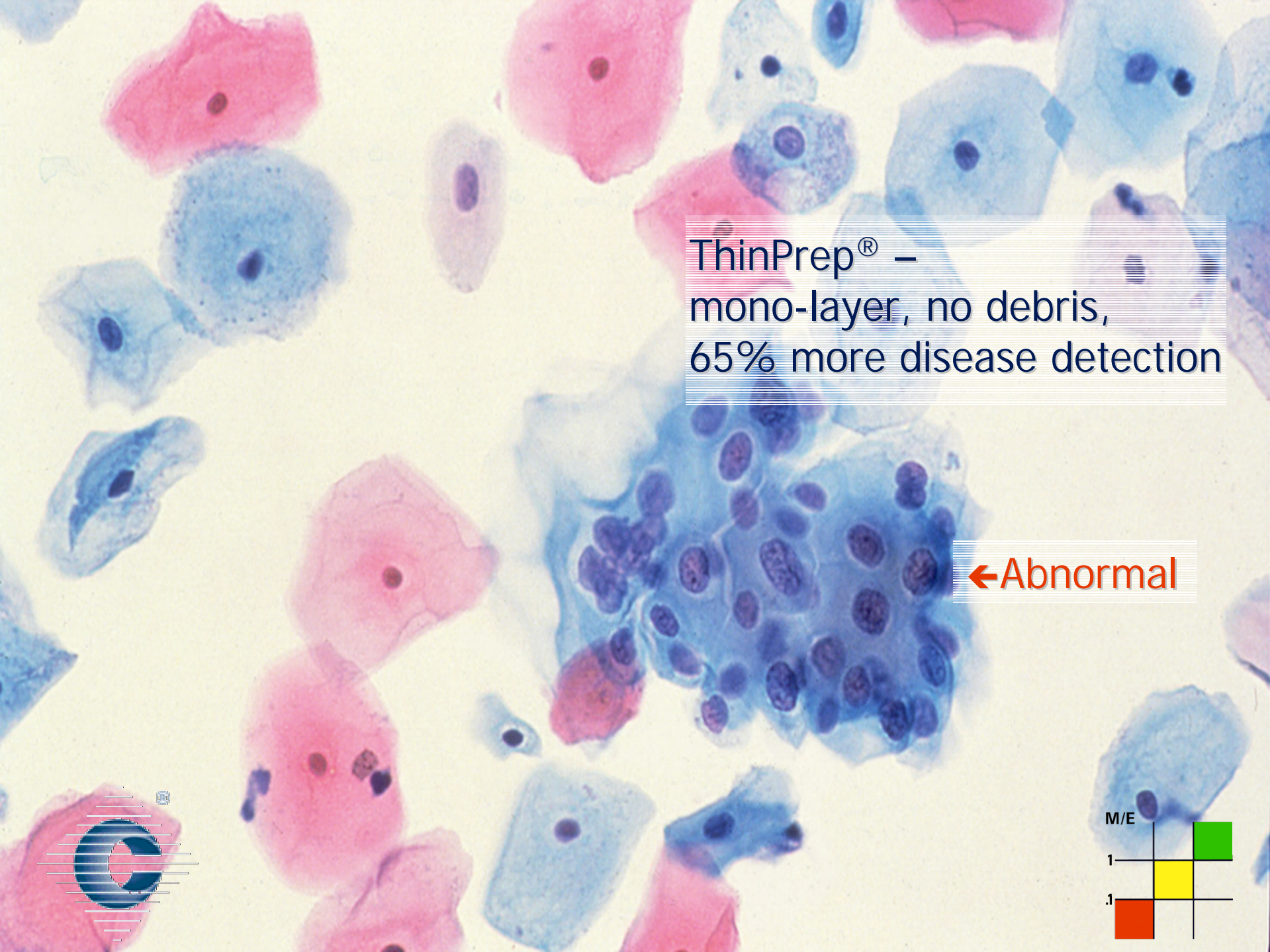
ThinPrep[®] mono-layer, no debris

Before, variable



ThinPrep[®], uniform



The background of the slide is a ThinPrep Pap smear. It shows a clear, monolayered distribution of cells. There are several large, pink, squamous epithelial cells with distinct nuclei. Interspersed among them are numerous smaller, blue-stained cells, likely lymphocytes or other inflammatory cells. The overall appearance is clean and free of debris, which is characteristic of the ThinPrep preparation method.

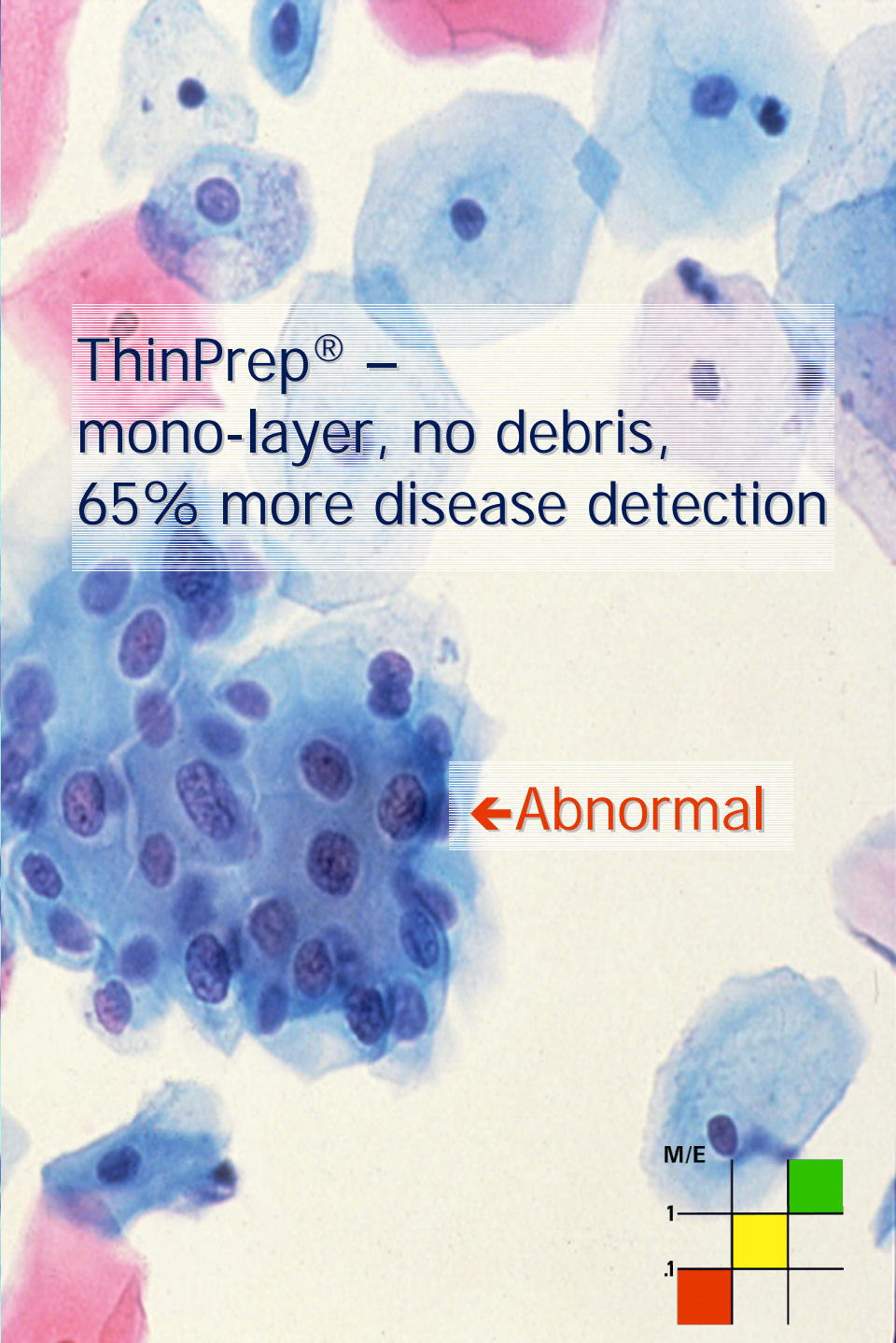
ThinPrep® –
mono-layer, no debris,
65% more disease detection

← Abnormal





Before –
clumps, debris,
>50% false negative (error)



ThinPrep® –
mono-layer, no debris,
65% more disease detection

← Abnormal



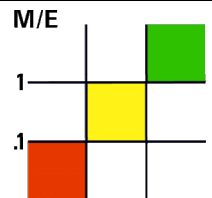
How much investment to anticipate and respond to change?

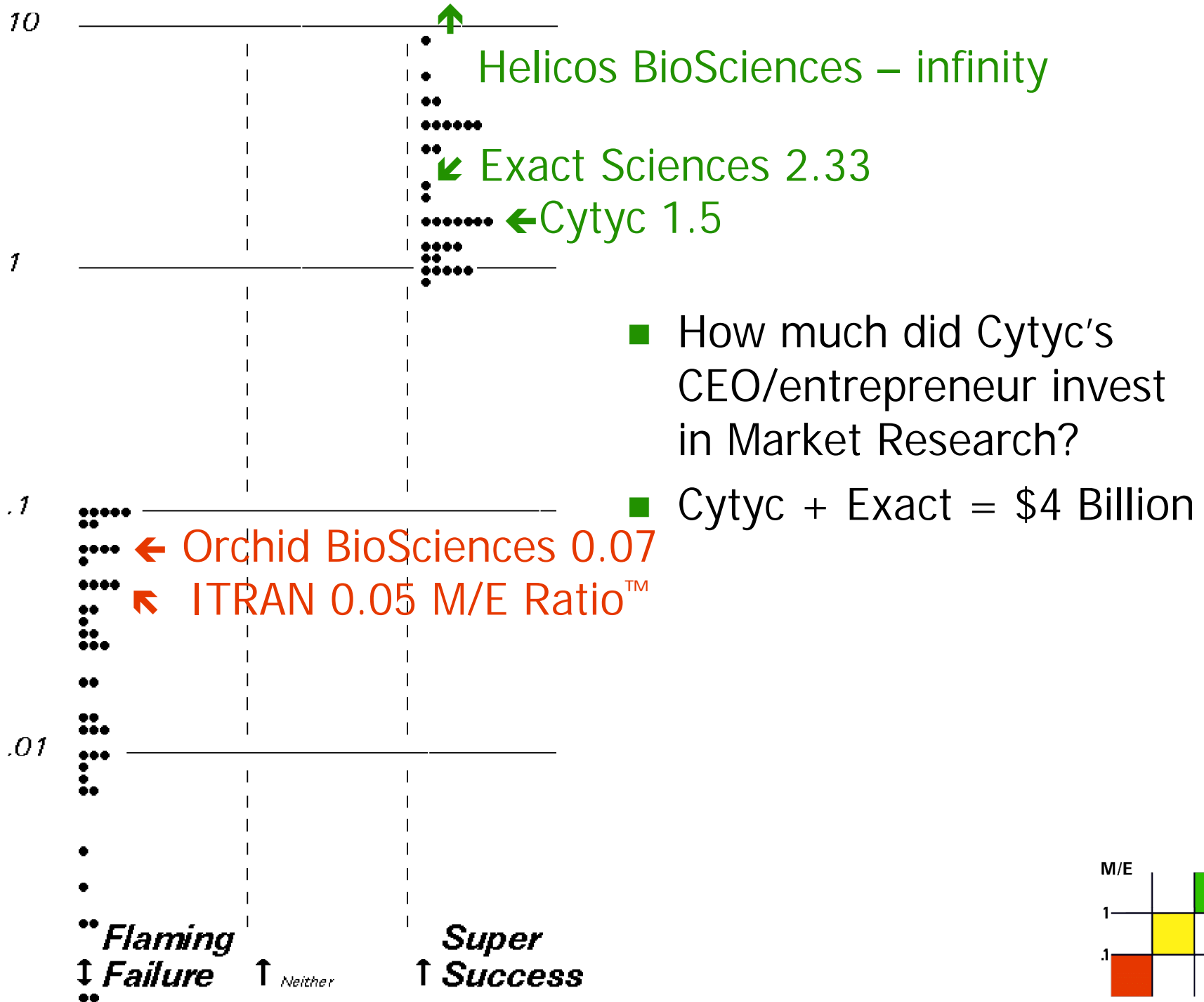
Investment model – in time

Product is ready ↓

	Investment ratio
Front End (M)arketing	M/E^{TM}
(E)ngineering	1
Promoting	
Selling	

Developing the product	Ramping up sales
✓	
✓	
	✓





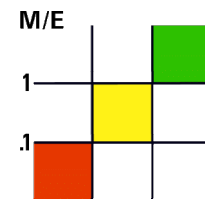
Before change strikes

What tools he wished he had in place

- “We didn't plan it that way [for Cytoc to invest 1.5 times as much in Market Research as in engineering]. We just did what we had to do. In retrospect, it would have been helpful to have such a planning tool.

“Now, we have a budgeting tool in the M/E Ratio™.”

Stanley N. Lapidus, Founder, Chairman, and CEO
ITRAN, Cytoc, Exact Sciences, and Helicos BioSciences



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