

The Diaphragm: a Female Controlled Method to Prevent HIV and Other Sexually Transmitted Infections?

Craig R. Cohen, MD, MPH

Department of Obstetrics and Gynecology
University of Washington

Diaphragm as a contraceptive and a method to reduce HIV/STI

❖ Potential Pros

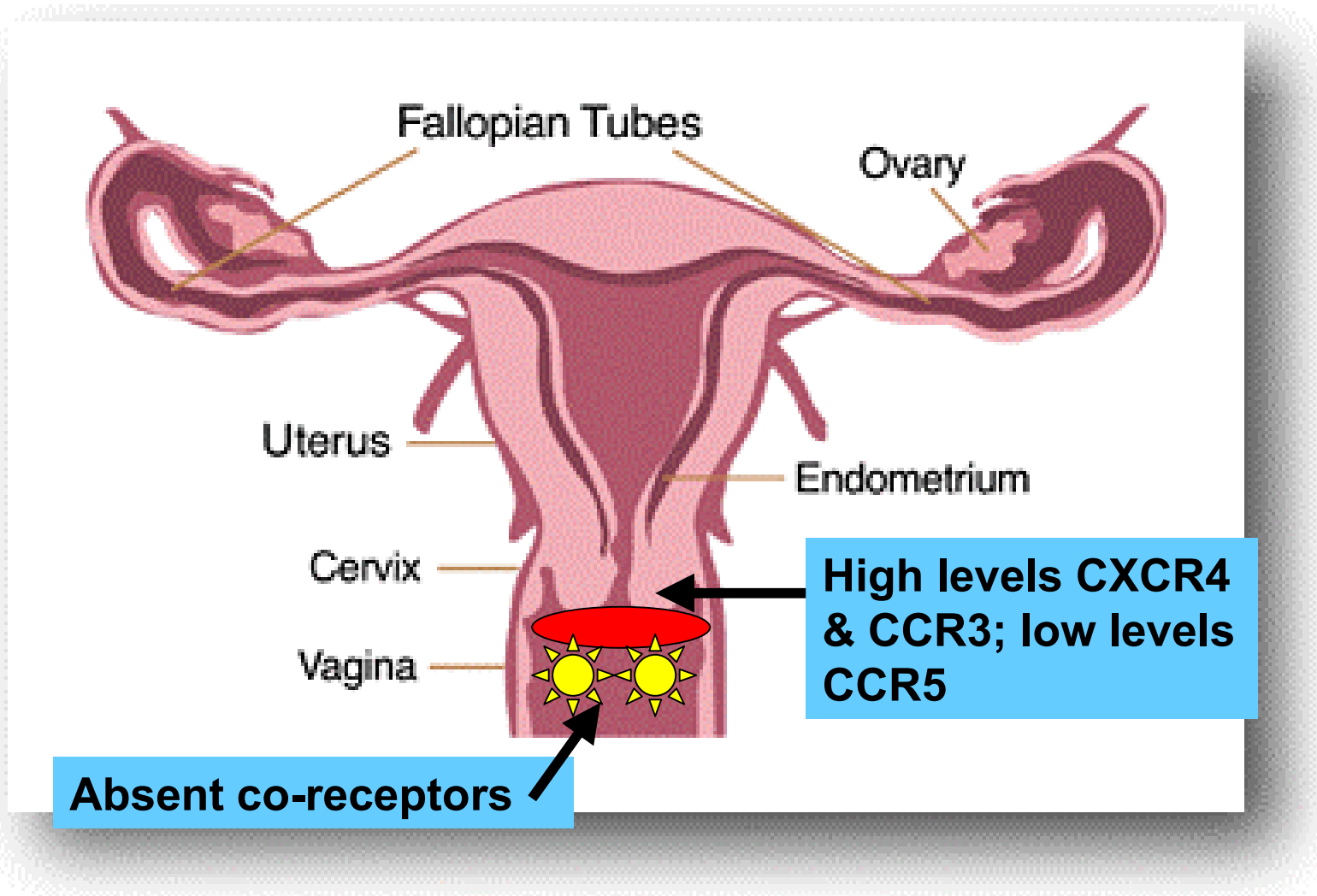
- “Female controlled”
- May be used without knowledge of partner
- High acceptability
- Adequate for those desiring to space pregnancy

❖ Potential Cons

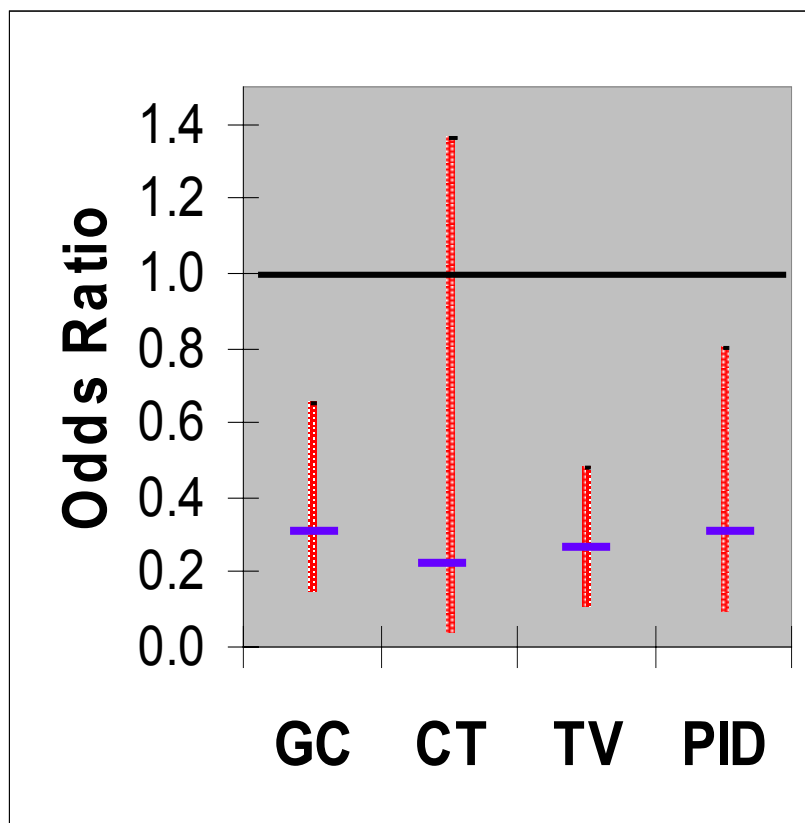
- Interrupt spontaneity
- Increased risk of UTI
- Difficulty with insertion and removal
- Low “perceived” contraceptive effectiveness
- Clinician time for initial fitting

Additional benefits of the diaphragm as an HIV/STD prevention method

- ❖ Safe and already widely approved method
 - Clinicians already trained in its use
- ❖ Reusable
 - Low cost-per-use
- ❖ May be used in conjunction with a microbicide



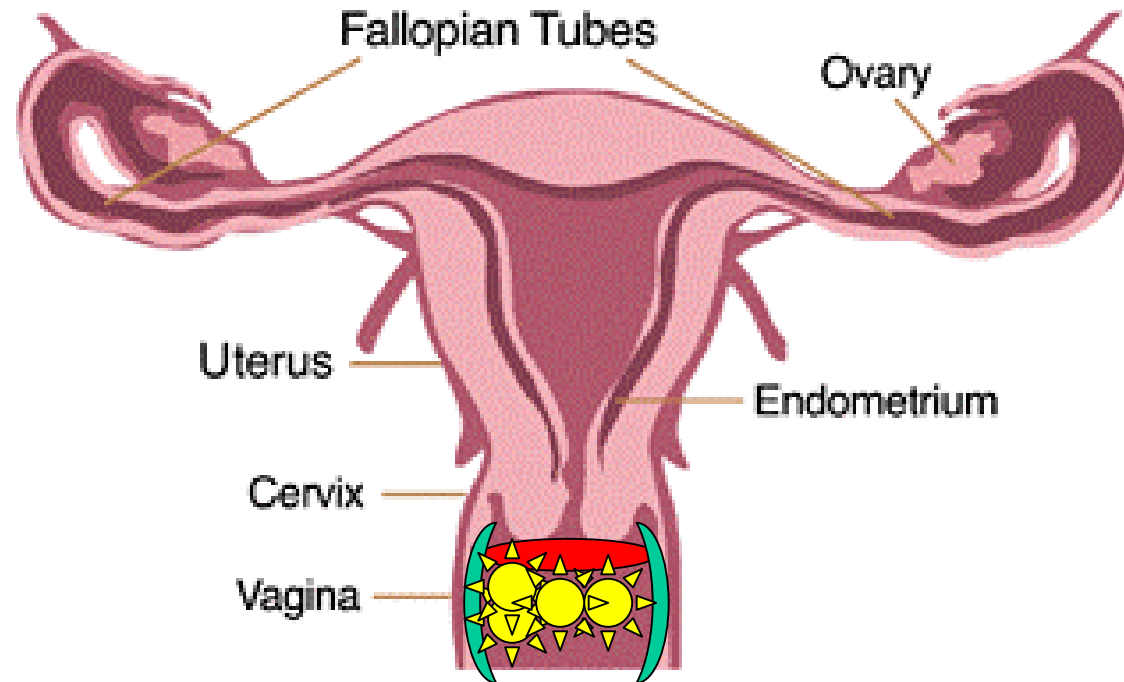
Existing data to support effectiveness of the diaphragm to prevent STD



- Retrospective case-control studies*
 - Study 1: 227 diaphragm vs. 4332 controls
 - Study 2: 238 diaphragm > 3 years vs. 1629 fertile controls

*Rosenberg, et al. 1992; Cates, et al. 1993

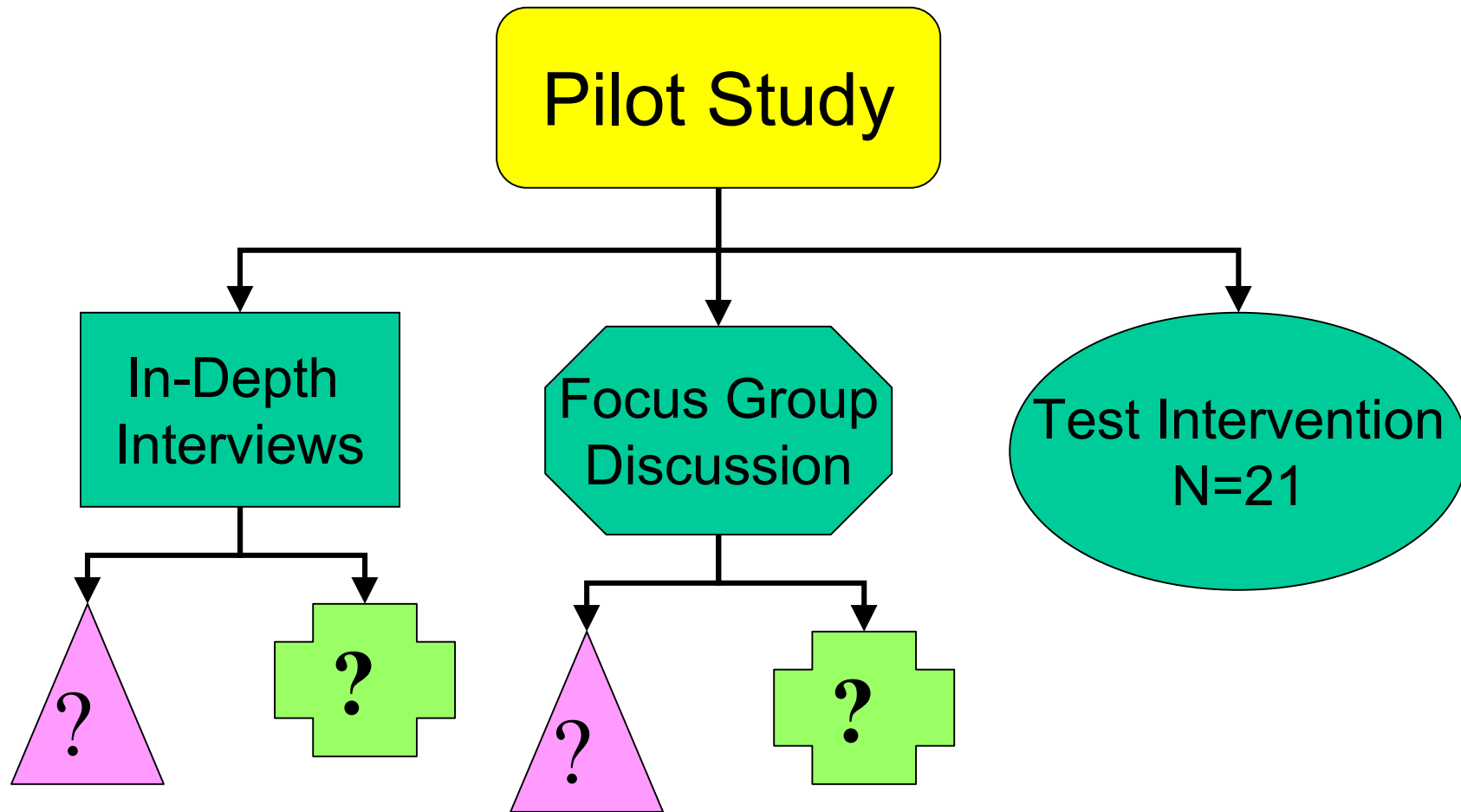
Dual protection: mechanical & microbicidal



Safety concerns with the diaphragm

- ❖ Allergy to latex
 - Silicone diaphragms available
- ❖ Degradation of latex with petroleum based products
- ❖ Increased risk of urinary tract infection
- ❖ Toxic shock syndrome

Evaluation of diaphragm acceptability in Nairobi, Kenya



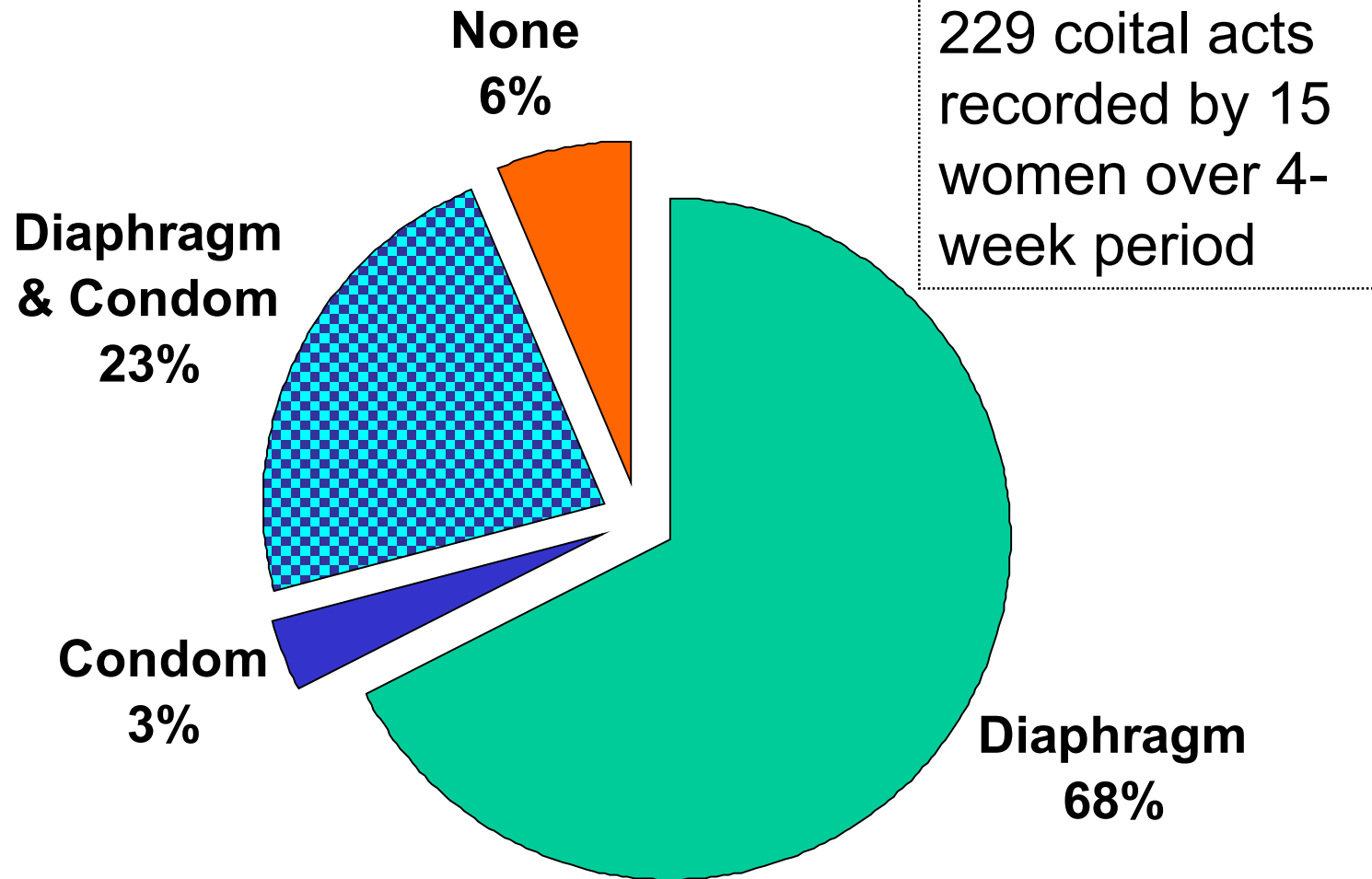
Pilot study: Use of the diaphragm among women attending an STD clinic

	2-week visit N=14	4-week visit N=15
Problems with insertion?	3 (18%)	2 (13%)
Problems with removal?	2 (12%)	1 (7%)
Problems with cleaning/storage?	0	0
Partner knew you used the diaphragm?		
No	2 (12%)	0
Sometimes	1 (6%)	0
Always	11 (82%)	15 (100%)
Did partner feel diaphragm during sex?		
No	7 (50%)	8 (53%)
Sometimes	7 (50%)	7 (47%)
Always	0	0

Acceptability of the diaphragm in an STD population

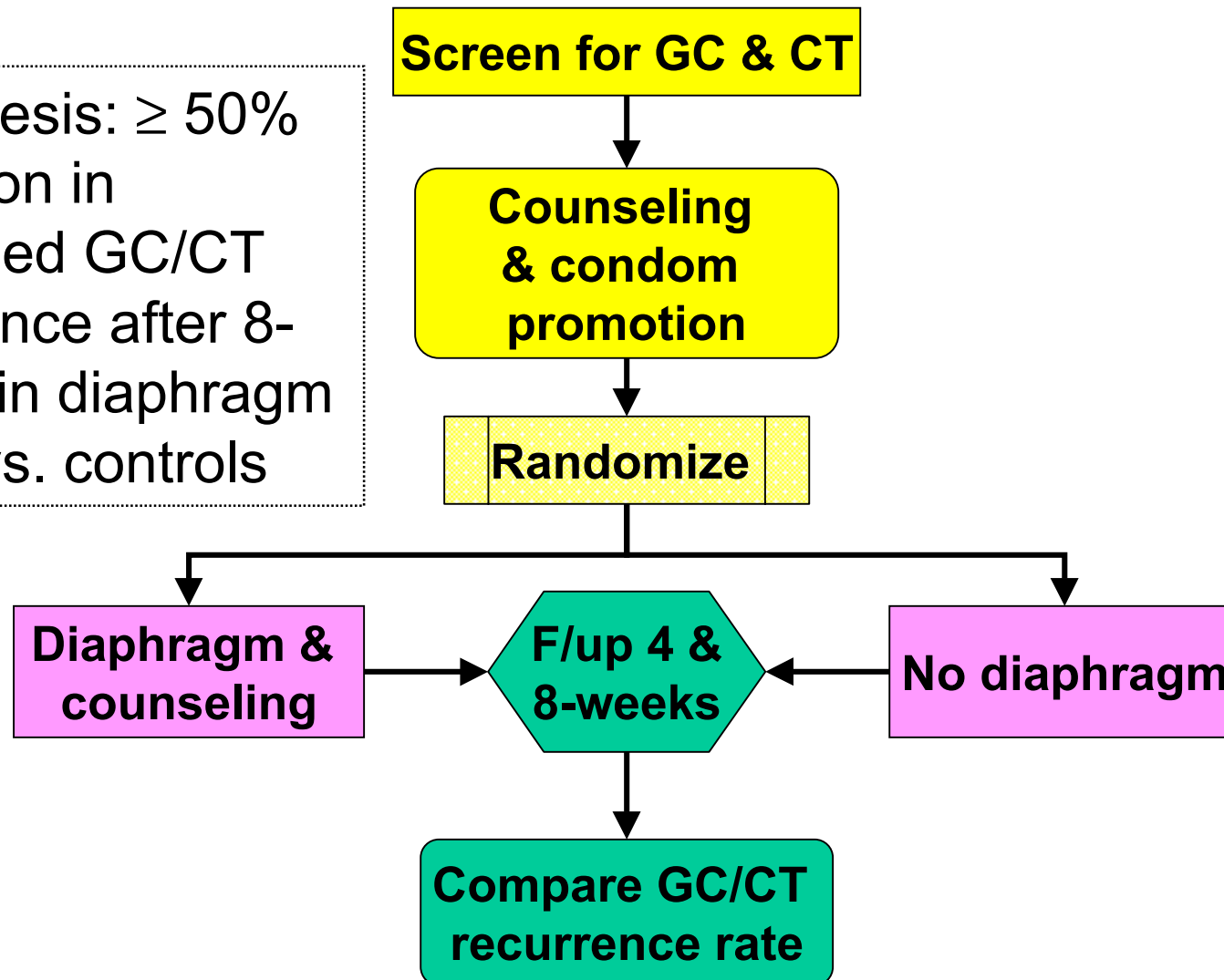
	2-week visit N=14	4 week visit N=15
Overall opinion of the diaphragm?		
Liked it very much	7 (50%)	11 (73%)
Liked it fairly well	6 (43%)	3 (20%)
Somewhat disliked it	1 (7%)	0
No opinion	0	1 (7%)

Coital acts protected by the diaphragm among women attending an STD clinic



Randomized trial of the diaphragm to prevent recurrent GC & CT

Hypothesis: $\geq 50\%$ reduction in combined GC/CT recurrence after 8-weeks in diaphragm users vs. controls



Acknowledgements

❖ University of Nairobi

- Dorcus Kungu
- Anjali Sharma
- Job Bwayo
- Mary Madumadu
- Eunice Mwiti
- Nancy Maina

❖ Kenya Medical Research Institute

- Elizabeth Bukusi

❖ Centers for Disease Control

- Carol Tevi-Benison
- Ann Duerr
- Mithi Sunderam
- Angela Prince