USPSTF recommendation to screen women 30-64 with HPV testing alone vs cotesting is reasonable

(AKA: cotesting is obsolete)

L. Stewart Massad, M.D.
Division of Gynecologic Oncology
Washington University SOM & St Louis VAMC

Disclosures

- No financial ties to assay manufacturers
- Not a cytopathologist
- Will not discuss unapproved uses of HPV assays (FDA approved primary HPV screening using cobas: I was on FDA panel)
- Have done malpractice consulting for cases alleging missed cervical cancer

Core principles: 1

- Not all cervical cancer can be prevented
- The goal of screening is to reduce morbidity/mortality from cervical cancer
  - Not finding HPV/abnormal Pap/CIN, esp if fated to regress
  - Recall that only 30-50% of CIN3 progress to cancer across decades (but we treat because we can't tell which)

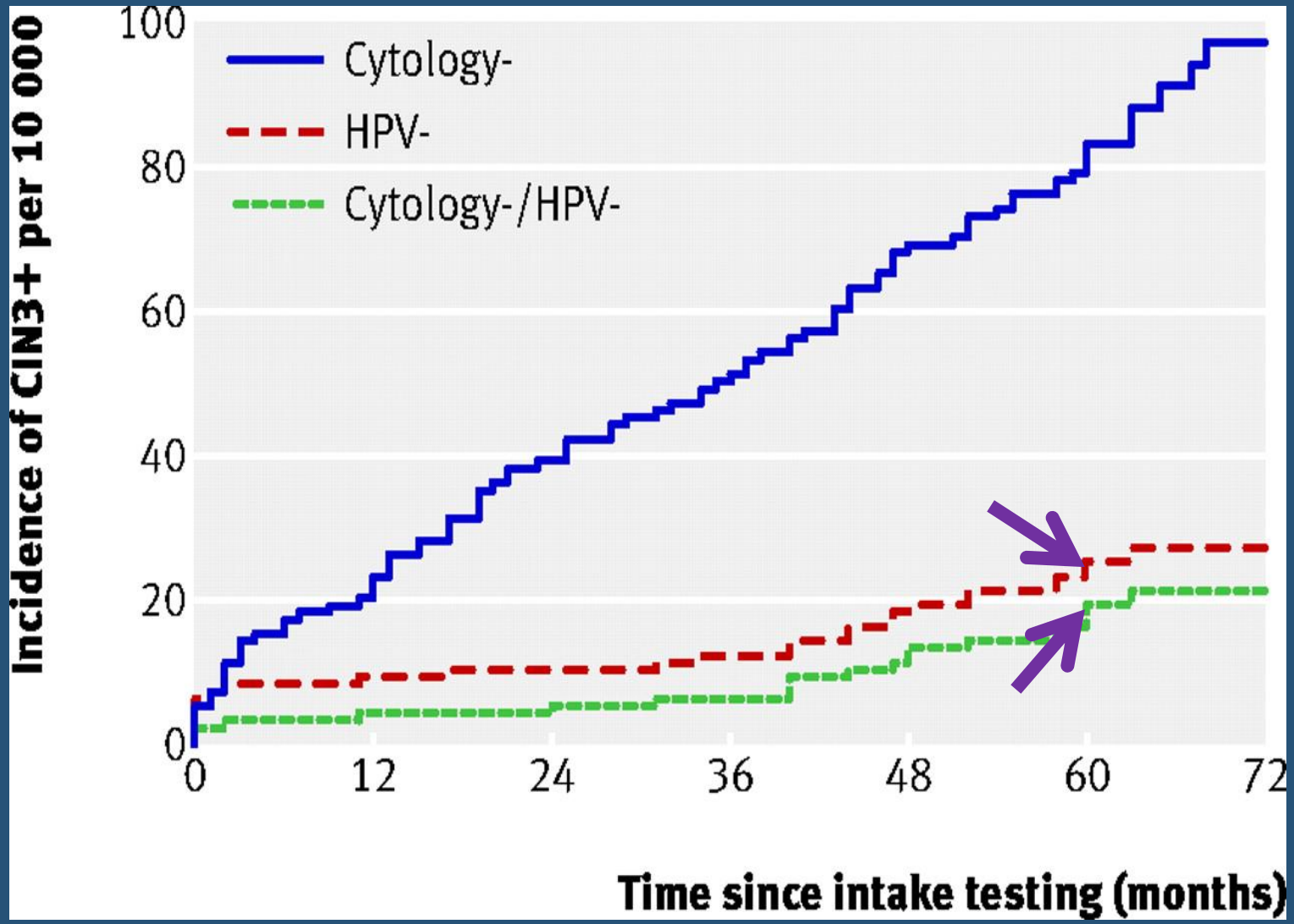
Core principles: 2

- False positive testing is harmful
  - False = positive screen in patient not destined to get cancer
  - Harms: stigma, shame, disrupted relationships, lost time, cost, pain from needless diagnostic therapeutic interventions

→Arguing over screening is safer because it prevents more cancers is ignorant or duplicitous (cf. hyst at 16yo)

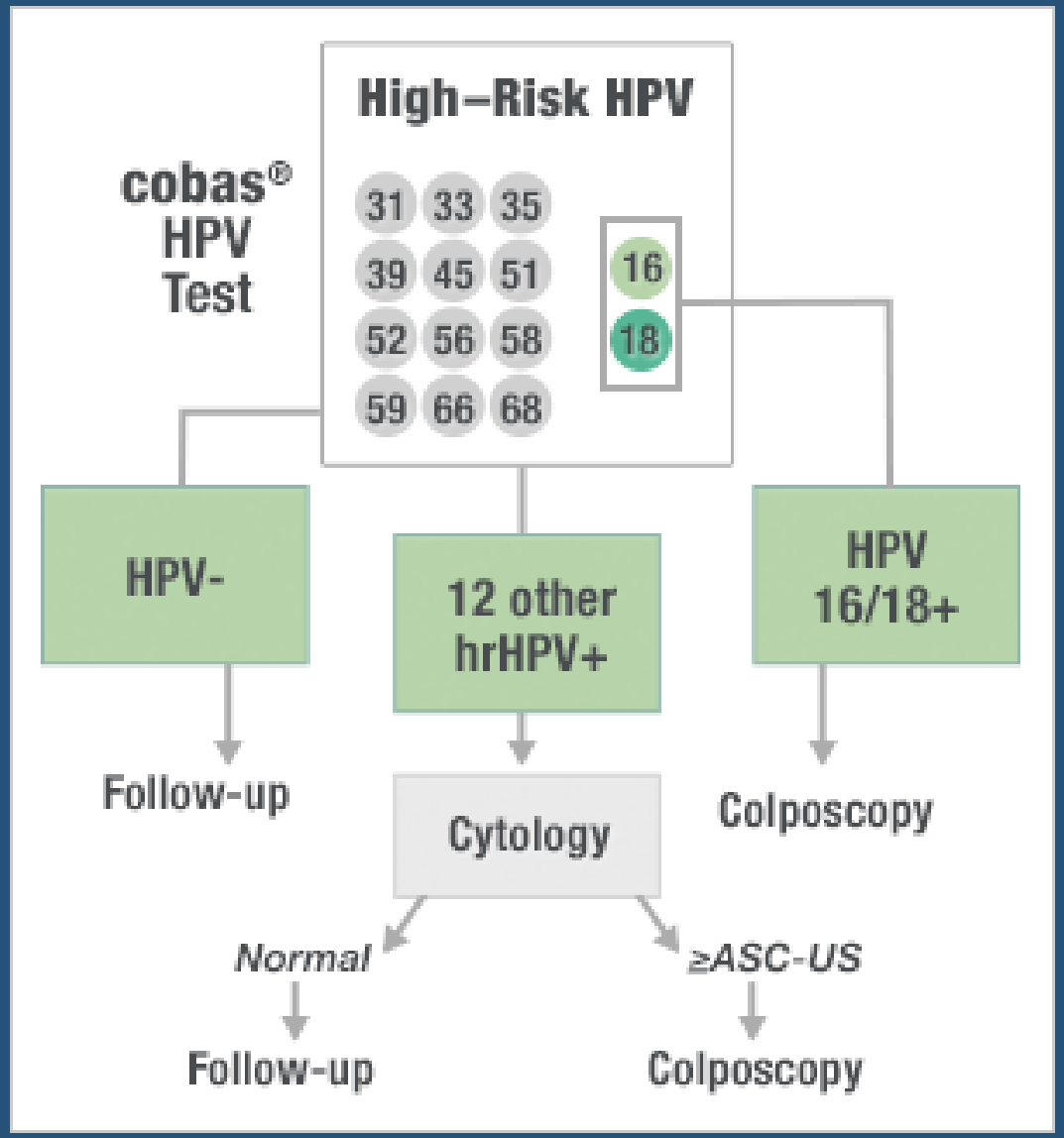
Data from ATHENA

- ATHENA: prospective trial conducted 2008-9, 3y FU
  - Colposcopy if ASCUS+ or HPV+, with random biopsy
- Sensitivity:
  - For current screening (Pap 25-29, cotest 30+): 62%
  - For screening + cobas algorithm: 76%
- Specificity
  - For current screening: 95%
  - For screening + cobas algorithm: 94%



Adding Pap minimally impacts 5y CIN3+ risk

Dillner J et al. BMJ 2008;337:a1754



- HPV testing algorithm from Roche, approved by FDA.
- Requires genotyping
- Minimizes low PPV resulting from high HPV prevalence, esp in young women
- Not applicable to other HPV assays

ATHENA data are obsolete

- Risk is lower at later screening rounds
- HPV16/18 prevalence is falling as women vaccinated as girls after 2006 age into screening cohorts
  - In NHANES 2011-14, target HPV prevalence down >60% in 21-24yo women—now 25-31yo.
  - CIN3+ risk will follow, increasing false + & - rates of cytology
  - HPV testing becomes preferred
- European trials (Pap vs HPV) show 5y intervals optimal
  - No RCTs compare HPV vs cotesting

Primary HPV screening is preferred
Cotesting is obsolete

- Primary HPV screening has similar sensitivity vs cotesting
  - Algorithm minimizes loss of specificity
- Cost is lower
- With decline in HPV16/18 prevalence, HPV testing will become dominant as cytology accuracy decays