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Community Outreach and Engagement

2025 CERVICAL CANCER AWARENESS SUMMIT

SUMMIT REMINDERS

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AUDIO & ZOOM CHAT

Keep audio muted and feel introduce yourself/ask questions in the chat!

SUMMIT RECORDING

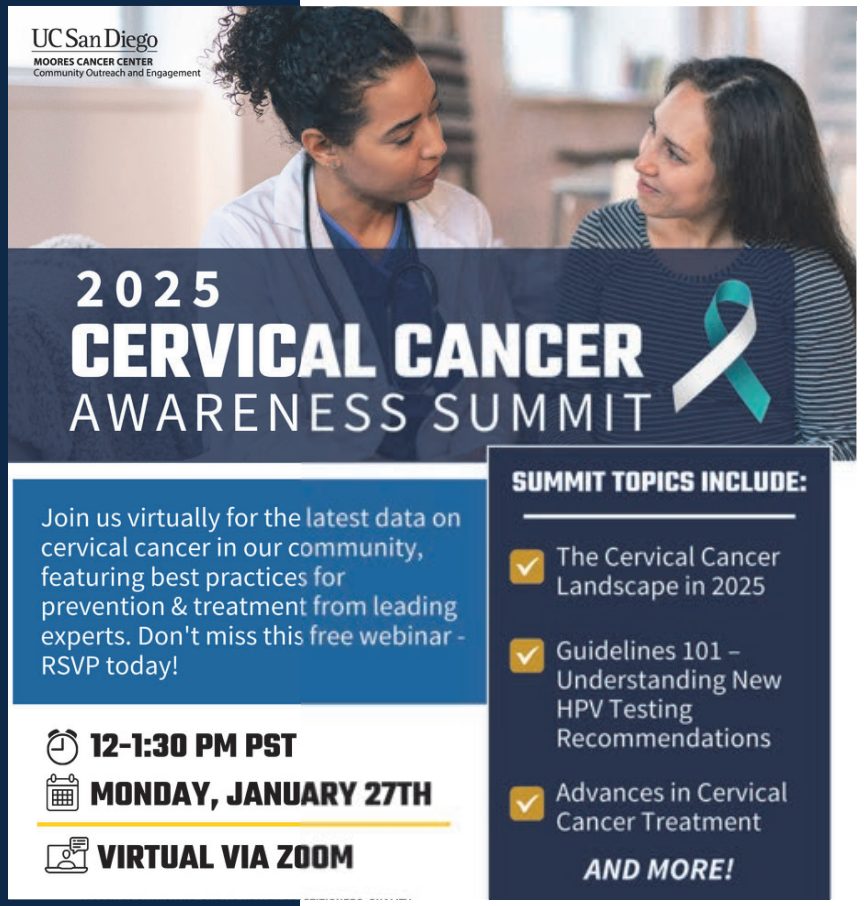
The summit slides and recording will be shared with all attendees

CERVICAL CANCER QUALITY IMPROVEMENT LEARNING COLLABORATIVE

Stay tuned! Sign up for our 2025 QI Learning Collaborative!

AGENDA

- **Welcome**
- **Patient Advocacy Acknowledgment**
- **The Cervical Cancer Landscape in 2025,**
  - Margaux Stack-Babich, UCSD Health
- **Advances in Cervical Cancer Treatment**
  - Dr. Jyoti Mayadev, UCSD Health
- **Advances in Radiation Therapy**
  - Dr. Chika Nwachukwu, UCSD Health
- **Guidelines 101 – Understanding New HPV Testing Recommendations**
  - Dr. Jessica Kingston, UCSD Health
- **Screening Case Study**
  - Marlen Herrera, Neighborhood Healthcare
- **Closing Remarks and Resources**



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Welcome!

3rd Annual Cervical Cancer Awareness Summit

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CERVIVOR

Honoring our Patient Advocates

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MARGAUX STACK-BABICH, MPH

UC San Diego Moores Cancer Center, Community Outreach & Engagement

The 2025 Cervical Cancer Landscape

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THE STATE OF CERVICAL CANCER IN 2025

Margaux Stack-Babich, MPH

January 27th, 2025

AGENDA

- The Global Burden of Cervical Cancer
- Cervical Cancer in...
  - The United States
  - California
  - San Diego
- Addressing the Cervical Cancer in Burden in Our Community

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CERVICAL CANCER GLOBAL SNAPSHOT

660,000+

cervical cancer cases were diagnosed *globally*

350,000+

lives were lost to cervical cancer *globally*

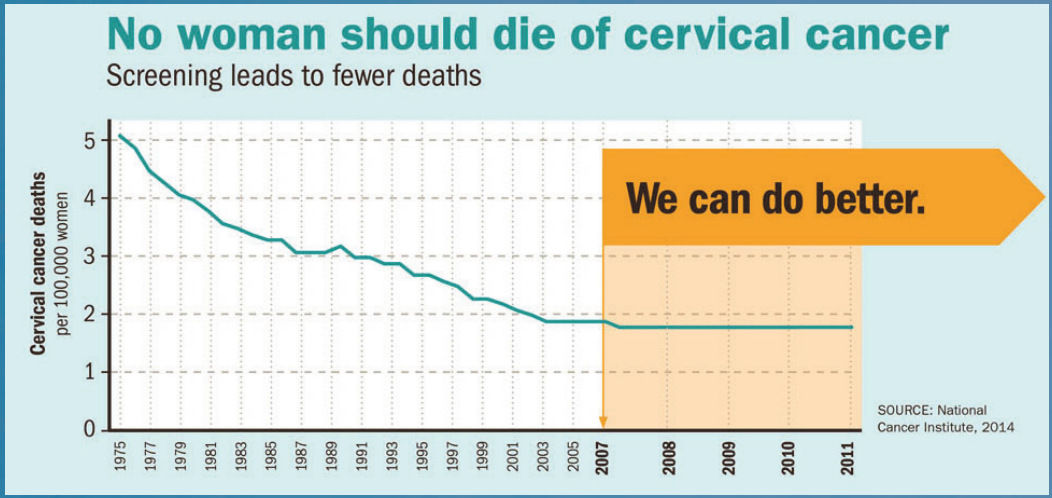
99.7%

cervical cancer cases are caused high-risk *human papillomavirus (HPV) infection*

World Health Organization. (n.d.). Cervical cancer. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/cervical-cancer#:~:text=Cervical%20cancer%20is%20the%20fourth,350%20000%20deaths%20in%202022.

TODAY'S CERVICAL CANCER LANDSCAPE

Death rates from cervical cancer (CC) have dropped significantly in the last 40 years due to regular Pap tests - finding cervical precancer before it turns into cancer.



CCR, 2020 https://www.ccrcal.org/learn-about-ccr/

Joung RH, Mullett TW, Kurtzman SH, et al. Evaluation of a National Quality Improvement Collaborative for Improving Cancer Screening. JAMA Netw Open. 2022;5(11):e2242354. doi:10.1001/jamanetworkopen.2022.42354

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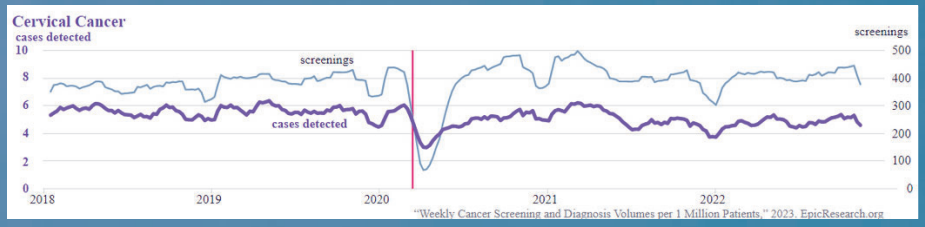
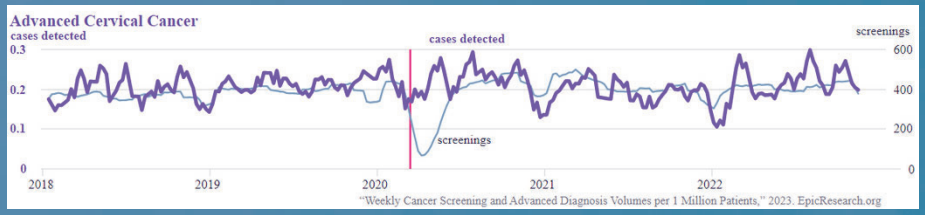
But concerningly, CC death rates in the US have stagnated, and in some regions increased, in recent years. Incidence rates are also increasing in 30-44yos [ACS 2024]:

- In a study published in the International Journal of Gynecological Cancer, almost **30,000** individuals were diagnosed with late-stage cervical cancer between 2001 to 2018
  - **Estimated 2025 Diagnoses**: 13,360 [ACS]
  - **Estimated 2025 Deaths**: 4,320 [ACS]





"IT MIGHT TAKE YEARS TO FULLY REALIZE THE IMPACT OF MISSED SCREENINGS"

Alban C, Sahakian S, Allen S, Stamp T. Missed Cancer Screenings Not Yet Associated with Increased Cancer Rates or Severity. Epic Research. https://epicresearch.org/articles/missed-cancer-screenings-not-associated-with-increased-cancer-rates-or-severity. Accessed on January 15, 2025.

CERVICAL CANCER IN THE UNITED STATES

- Cervical cancer incidence rates are *decreasing steeply* in women in their 20s, having decreased 11% per year in women age 20-24 from 2012 through 2021, reflecting prevention by HPV vaccination
- *However,* cases have increased in women 30-44 years old by 1.7% per year from 2012 through 2019, highlighting the need for more emphasis on screening as well as broader uptake of the vaccine
- **If diagnosed early, cervical cancer is highly treatable with a 5 year survival of 91%**

Cervical cancer prognosis and survival rates. NCI. (n.d.). https://www.cancer.gov/types/cervical/survival

Cooley, J. J. P., Maguire, F. B., Morris, C. R., Parikh-Patel, A., Abrahao, R., Chen, H. A., & Keegan, T. H. M. (2023). Cervical Cancer Stage at Diagnosis and Survival among Women ≥65 Years in California. Cancer Epidemiol Biomarkers Prev, 32(1), 91–97. https://doi.org/10.1158/1055-9965.EPI-22-0793

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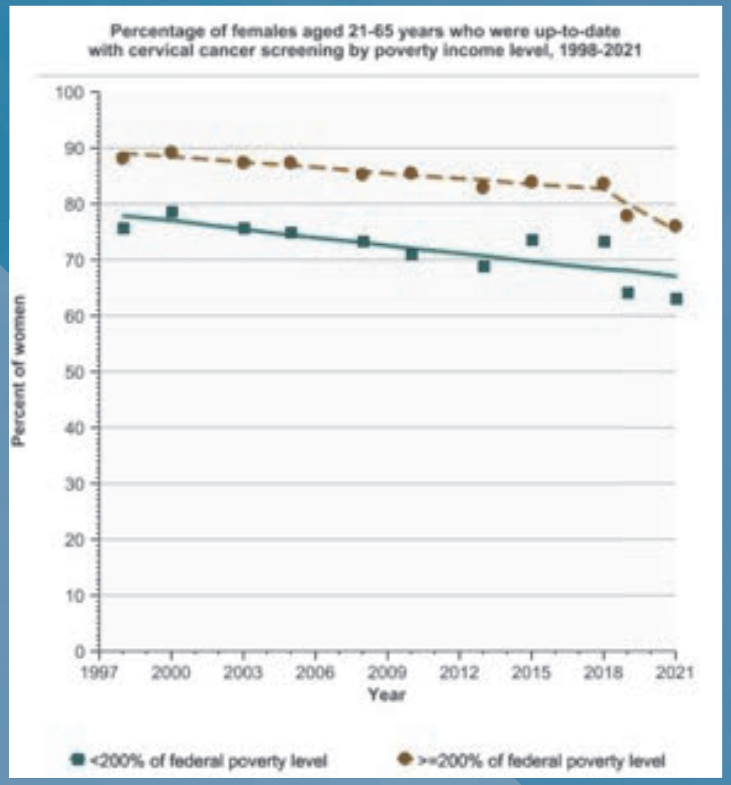
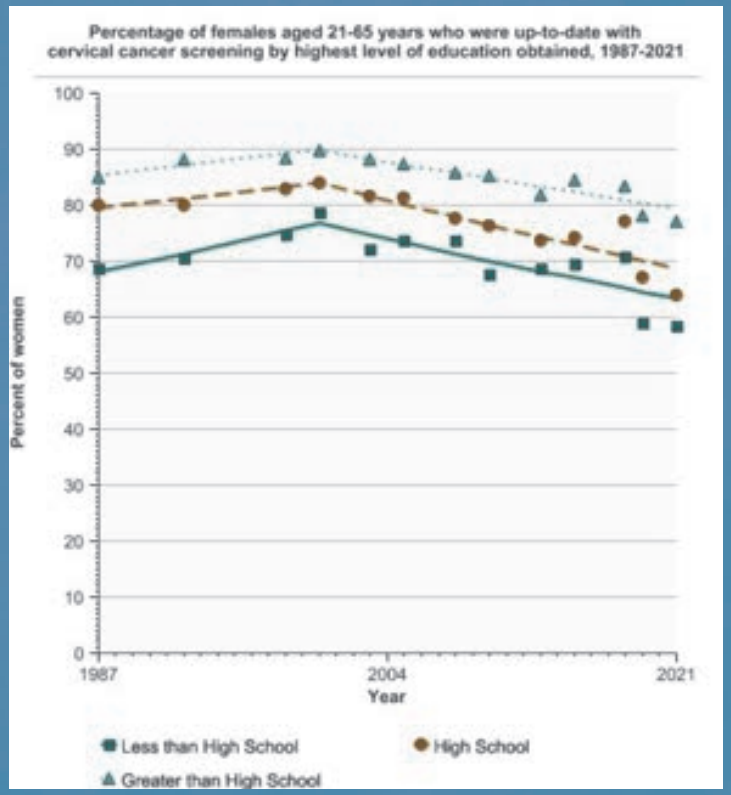
CERVICAL CANCER SCREENING IN THE US, CONT.

Healthy People 2030 Cervical Cancer Screening Goal: 79.2%

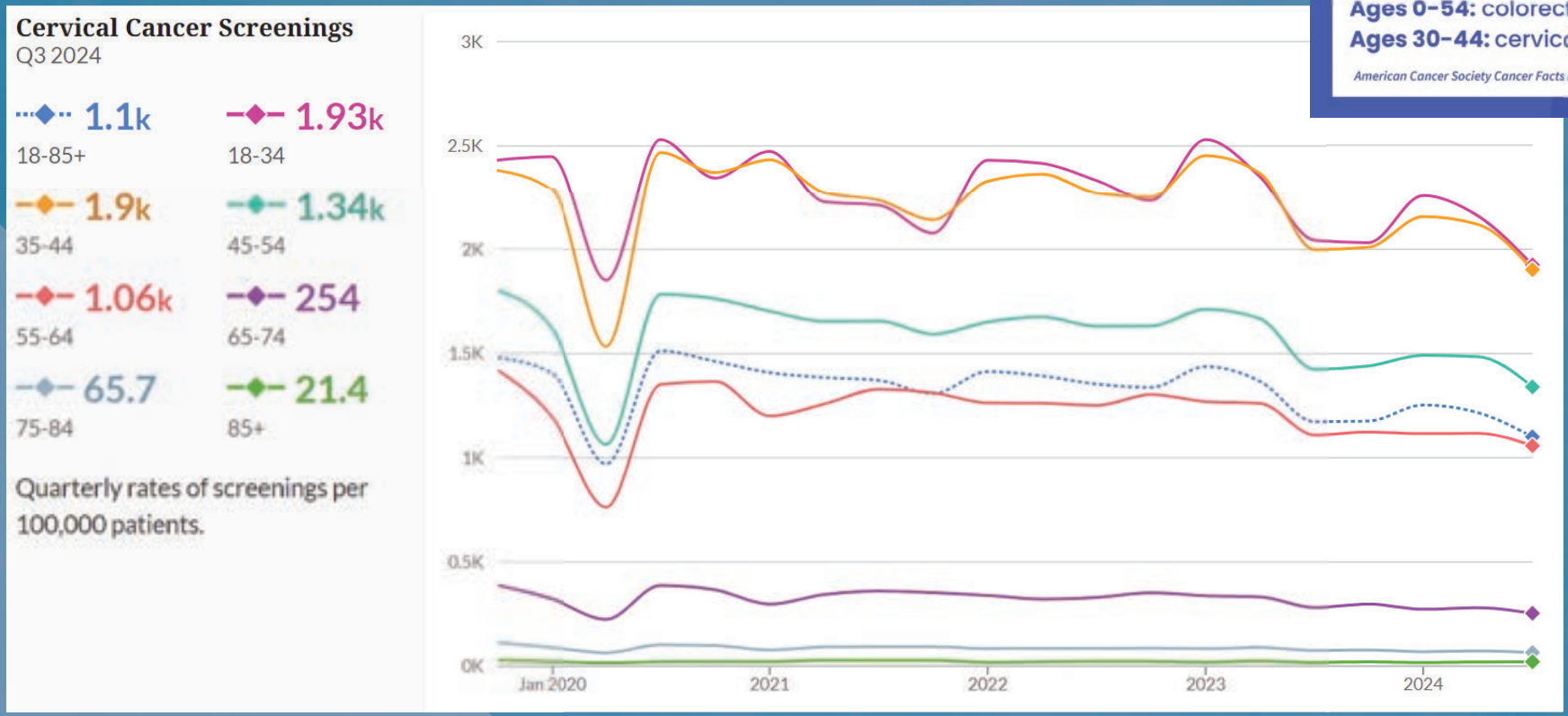




- Even at a national level, significant disparities in screening participation are seen by income level and education attainment
  - <200% of federal poverty level - 63.3% up-to-date with screening
  - >=200% of federal poverty level - 76% up-to-date
  - Less than High School - **58.4%**
  - High School - **63.9%**
  - Greater than High School - **77.2%**

Cervical cancer prognosis and survival rates. NCI. (n.d.). https://www.cancer.gov/types/cervical/survival

CERVICAL CANCER SCREENING IN THE US CONT.



American Cancer Society

4 screenable cancers on the rise

All ages: breast, prostate
Ages 0-54: colorectal
Ages 30-44: cervical

American Cancer Society Cancer Facts & Figures 2024

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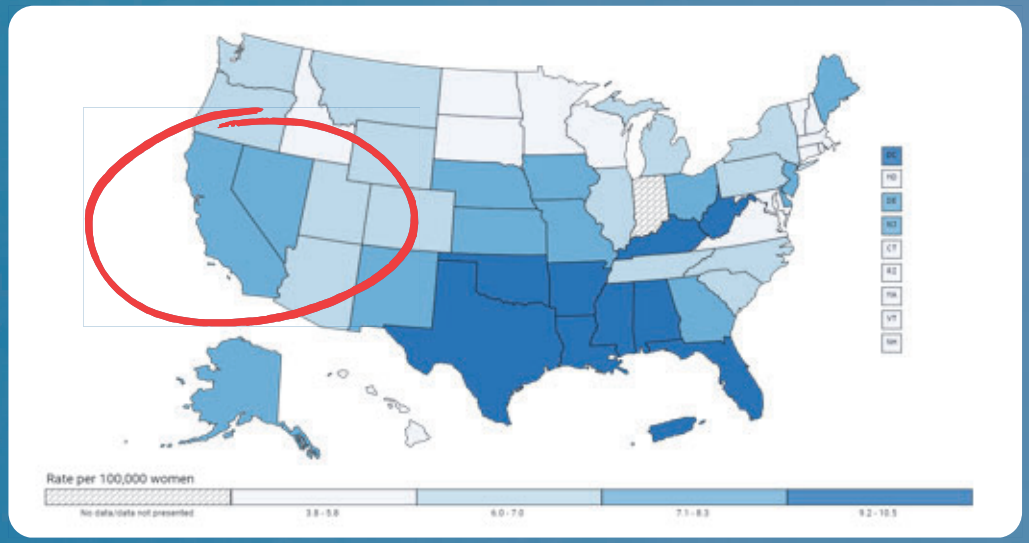
CERVICAL CANCER IN CALIFORNIA

Rate of New Cancers in the United States, 2021

Cervix, All Ages, All Races and Ethnicities, Female



2020 BRFSS Survey DataMaguire FB, Islam MM, Hofer BM, Movsisyan AS, Morris CR, Parikh-Patel A, Keegan THM, Wun T. Heat Maps: Trends in Late-Stage Diagnoses of Screen-Detectable Cancers in California Counties, 2000-2018. Sacramento, CA: California Cancer Reporting and Epidemiologic Surveillance Program, University of California Davis Comprehensive Cancer Center, University of California Davis, June 2021.

State Cancer Profiles. State Cancer Profiles > Screening and Risk Factors Table. (n.d.).

Centers for Disease Control and Prevention. (n.d.). USCS data visualizations - CDC. Centers for Disease Control and Prevention.

- California cervical cancer screening rate in past 3 years, ages 21-65, 2020 data: **79.3%**
  - Slightly above nat'l average, but still below goal
  - Average hides disparities across communities
- From 2000 to 2018 the percentage of cervical cancer cases diagnosed at a late-stage increased. In the most recent 10yr period, the proportion diagnosed late-stage remained high (52.6% to 57.9%) and relatively unchanged.
- Nearly **1 in 5 new cervical cancers** diagnosed from 2009-2018 were in women 65+ *(outside of screening).*
  - More of these women (71%) presented with late-stage disease than younger women (48%).
  - Suggests "women have not been adequately screened prior to the upper age cutoff [of 65]."

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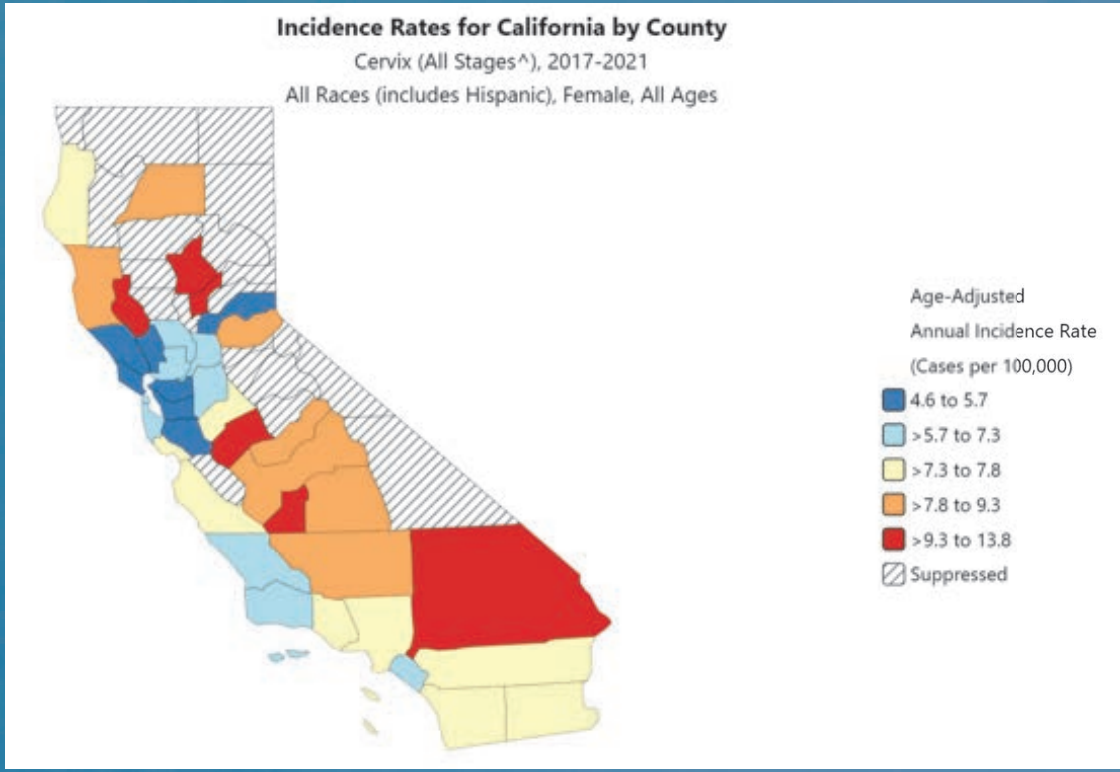

CERVICAL CANCER IN SAN DIEGO

2021 Statistics

- 115 cases in 2021
- 45% of cases in Hispanic/Latine individuals (up from 38%)
- 11% in Asian/Asian American individuals (down from 15%)
- **85% of cases were in ages 18-64**; 15% were aged 65+

California County	American Indian / Alaska Native Rate per 100,000	Asian / Pacific Islander Rate per 100,000	Non-Hispanic Black Rate per 100,000	Hispanic Rate per 100,000	Non-Hispanic White Rate per 100,000
San Diego County	*[a]	7.1	5.7	9.5	6.1

California Cancer Registry, California Department of Public Health. Maguire FB, Islam MM, Hofer BM, Movsisyan AS, Morris CR, Parikh-Patel A, Keegan THM, Wun T. Heat Maps: Trends in Late-Stage Diagnoses of Screen-Detectable Cancers in California Counties, 2000-2018. Sacramento, CA: California Cancer Reporting and Epidemiologic Surveillance Program, University of California Davis Comprehensive Cancer Center, University of California Davis, June 2021.

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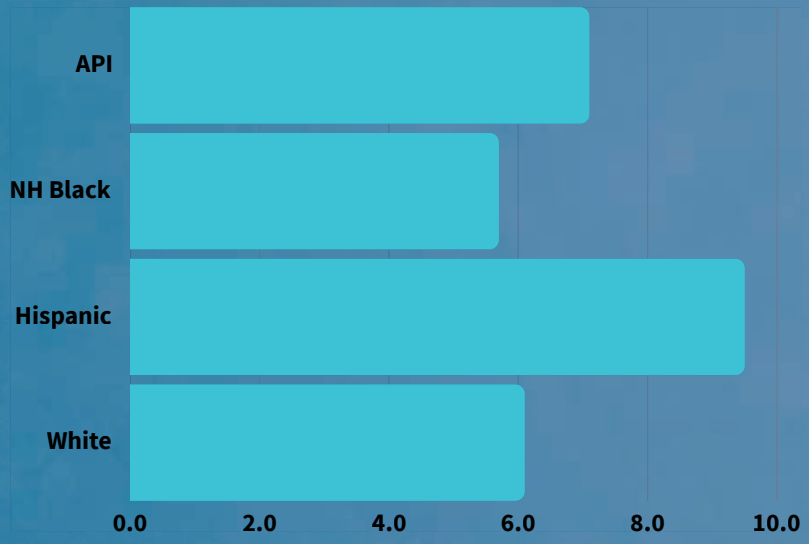
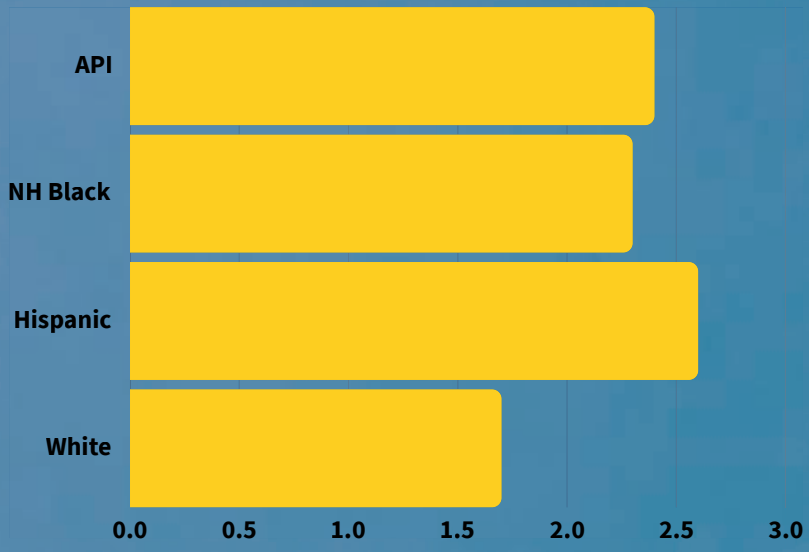
CERVICAL CANCER IN SAN DIEGO CONT.

CERVICAL CANCER INCIDENCE IN SAN DIEGO COUNTY, RATE PER 100,000 INDIVIDUALS (2012-2021)



CCR, 2020 https://www.ccrcal.org/learn-about-ccr/

CERVICAL CANCER MORTALITY IN SAN DIEGO COUNTY, RATE PER 100,000 INDIVIDUALS (2012-2021)



Although cases were not high enough to determine local incidence and mortality rates in San Diego County, national data shows American Indian and Alaska Natives are nearly 2x as likely to develop cervical cancer compared to white women and 4x as likely to die from it.

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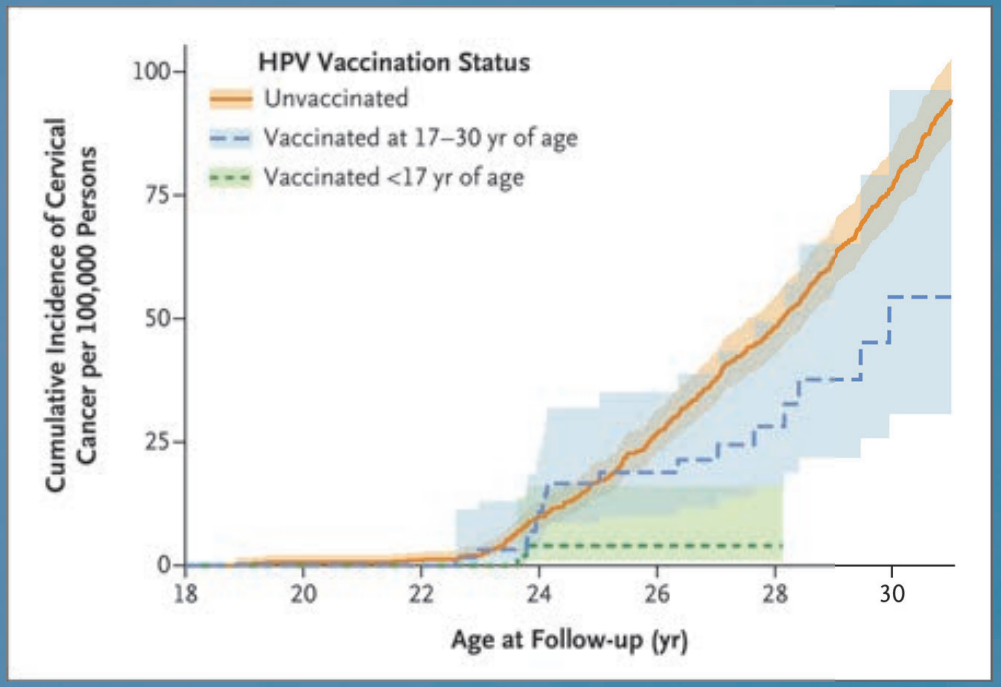
OUR SAN DIEGO
HRSA CERVICAL SCREENING RATES

CC HRSA 2017	CC HRSA 2018	CC HRSA 2019	CC HRSA 2020	CC HRSA 2021	CC HRSA 2022	CC HRSA 2023
59.22%	57.59%	48.31%	36.47%	38.82%	49.95%	
56.47%	62.70%	64.81%	64.12%	58.29%	59.91%	61.28%
58.28%	57.44%	56.74%	51.96%	55.34%	55.99%	55.63%
74.92%	66.25%	64.91%	56.00%	60.08%	56.18%	60.87%
56.22%	63.69%	70.56%	51.39%	65.50%	67.17%	73.58%
66.12%	74.85%	71.41%	65.70%	65.91%	61.97%	68.18%
60.20%	63.51%	67.04%	61.48%	63.23%	64.14%	65.22%
44.82%	48.65%	48.20%	55.69%	55.22%	63.57%	69.27%
39.46%	38.10%	43.75%	51.04%	14.18%	43.62%	33.08%
60.96%	62.57%	62.82%	67.00%	65.00%	65.20%	65.57%
32.83%	32.04%	24.90%	20.08%	17.50%	15.99%	14.86%
56.67%	62.58%	67.24%	56.94%	67.41%	70.00%	73.59%
55.51%	**57.50%**	**57.56%**	**53.16%**	**52.21%**	**56.14%**	**58.28%**

*Cumulatively, screening rates for San Diego federally qualified health centers **increased 2.14%** from 2022 to 2023*

IMPROVING PREVENTION IN SAN DIEGO: HPV VACCINATION & SCREENING



Takeaway? *The HPV vaccine works – comprehensive vaccination of youth is cervical cancer prevention in the next generation, and catch-up vax/on time screening for older cohort not eligible for HPV vaccine*

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Lei, J., Ploner, A., Elfström, K. M., Wang, J., Roth, A., Fang, F., Sundström, K., Dillner, J., & Sparén, P. (2020). HPV vaccination and the risk of invasive cervical cancer. New England Journal of Medicine, 383(14), 1340–1348. https://doi.org/10.1056/nejmoa1917338

KEY TAKEAWAYS

Any person with a cervix is at risk for cervical cancer. But our richly diverse community of the SD border region is home to multiple, intersecting populations that face increased risk of cervical cancer

Suggested Strategies

- Community Outreach via CHWs and Promotoras in the area
- Patient Navigation
- Provider Training/Telemonitoring
- Accessible and free health screenings

01. **Cervical cancer screening rates have not fully recovered from pandemic drops, increasing risk for under-screened women.**

- Without action, precancers & cancers will go undetected.

02. **Improving outreach & care delivery through quality improvement can improve screening uptake.**

- Team-wide, multi-level interventions are most comprehensive for improving screening delivery and managing abnormal results for all patients.

03. **Everyone has a role in making San Diego cervical cancer free!**

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THANK YOU!

Margaux Stack-Babich, MPH
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JYOTI MAYADEV, MD

UC San Diego Health, Radiation Oncologist and Professor of Radiation Medicine and Applied Sciences

Advances in Cervical Cancer Treatment

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ADVANCES IN CERVICAL CANCER TREATMENT

Jyoti Mayadev, MD
Professor, Radiation Medicine and Applied Sciences
Assistant Vice Chair, Developmental Therapeutics
Director of Gynecologic Brachytherapy
University of California, San Diego

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Disclosures

- Consulting/Honorarium: Merck, AstraZeneca, Primmune, Varian Medical Systems, Agenus Bio, KORTUC

- Grants:
- NCI: RO1: 2.5M (Zamarin/Mayadev)
- R50: 887K (Mayadev)
- Curebound (Mayadev/Advani/Eskander/Vijayanand)
- NRG Oncology
- MCC CCSG funding

Outline

KEY ADVANCES IN CERVICAL CANCER

THERAPEUTIC STRATEGY IN NODE POSITIVE

FUTURE DIRECTIONS

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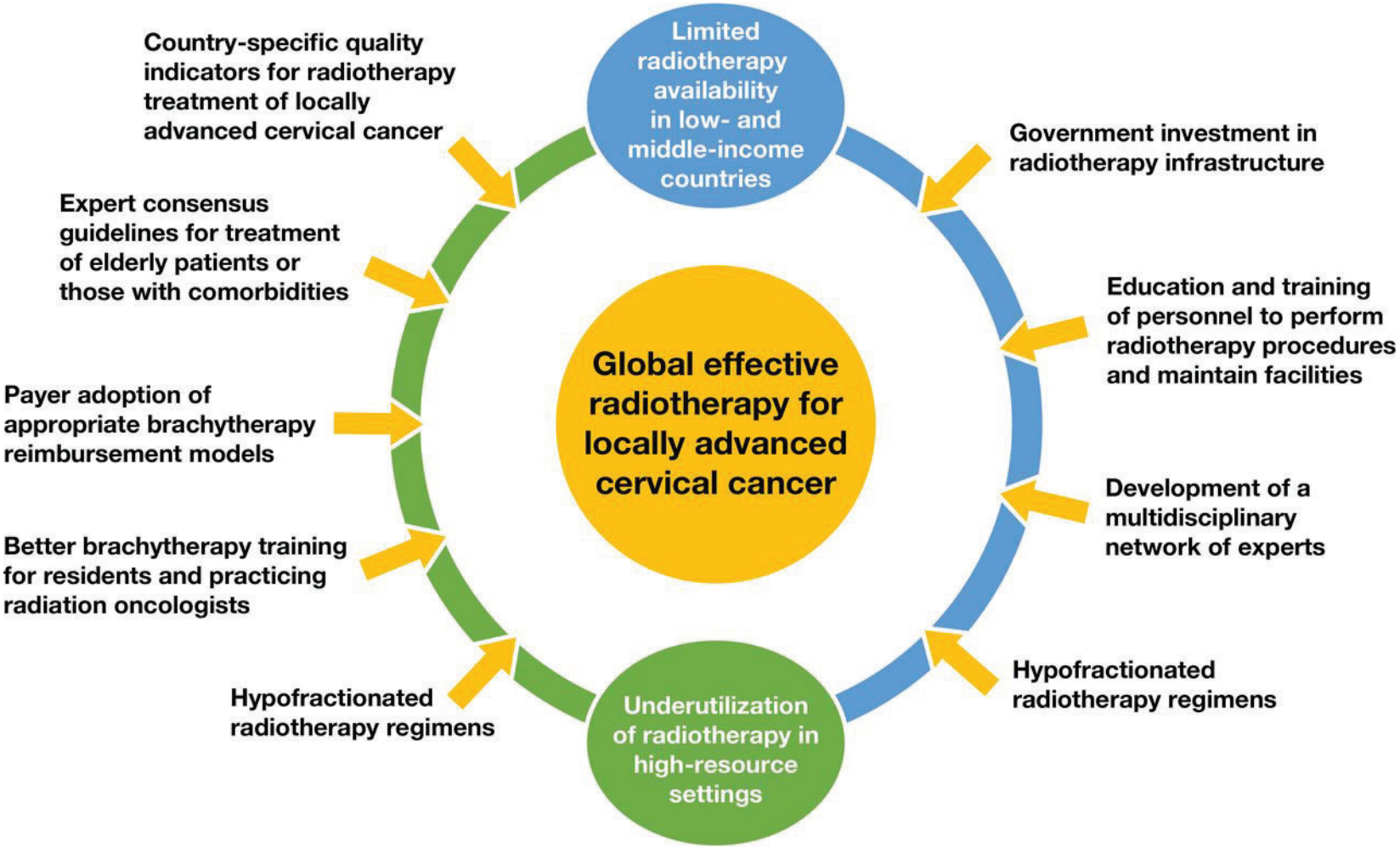
Challenges and solutions to achieving effective radiotherapy for locally advanced cervical cancer.



Mayadev et al. Int J Gynecol Cancer 2022;32:436-445

WHO 2020 Initiative to Eradicate Cervical Cancer

- 4 or fewer per 100 000 women
- Yr 2030 to put all countries :
- 90% of girls vaccinated with the HPV vaccine by age 15
- 70% of women screened with a high-quality test by ages 35 and 45
- 90% of women with cervical disease receiving treatment.

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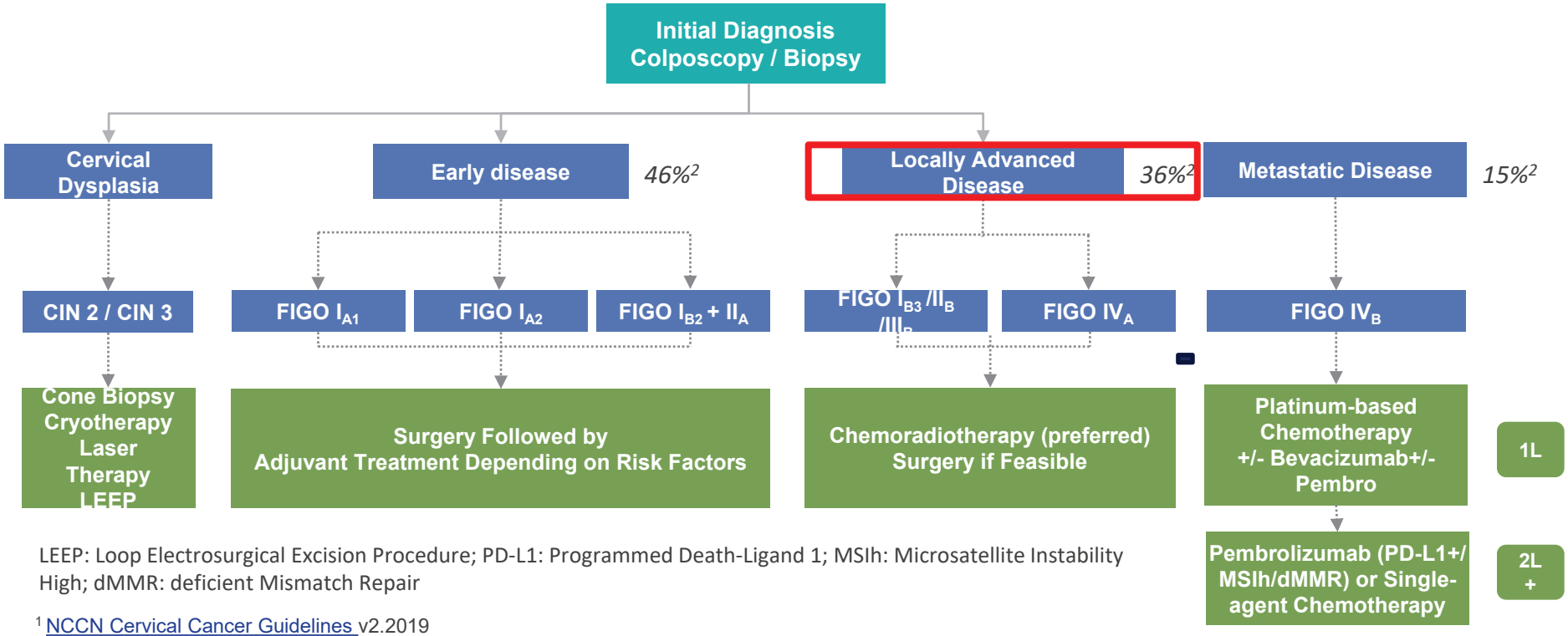
Cervical Cancer: Summary of Treatment



LEEP: Loop Electrosurgical Excision Procedure; PD-L1: Programmed Death-Ligand 1; MSIh: Microsatellite Instability High; dMMR: deficient Mismatch Repair

[1] NCCN Cervical Cancer Guidelines v2.2019
[2] SEER Cancer Stat Facts: Cervical Cancer. National Cancer Institute. Bethesda, MD

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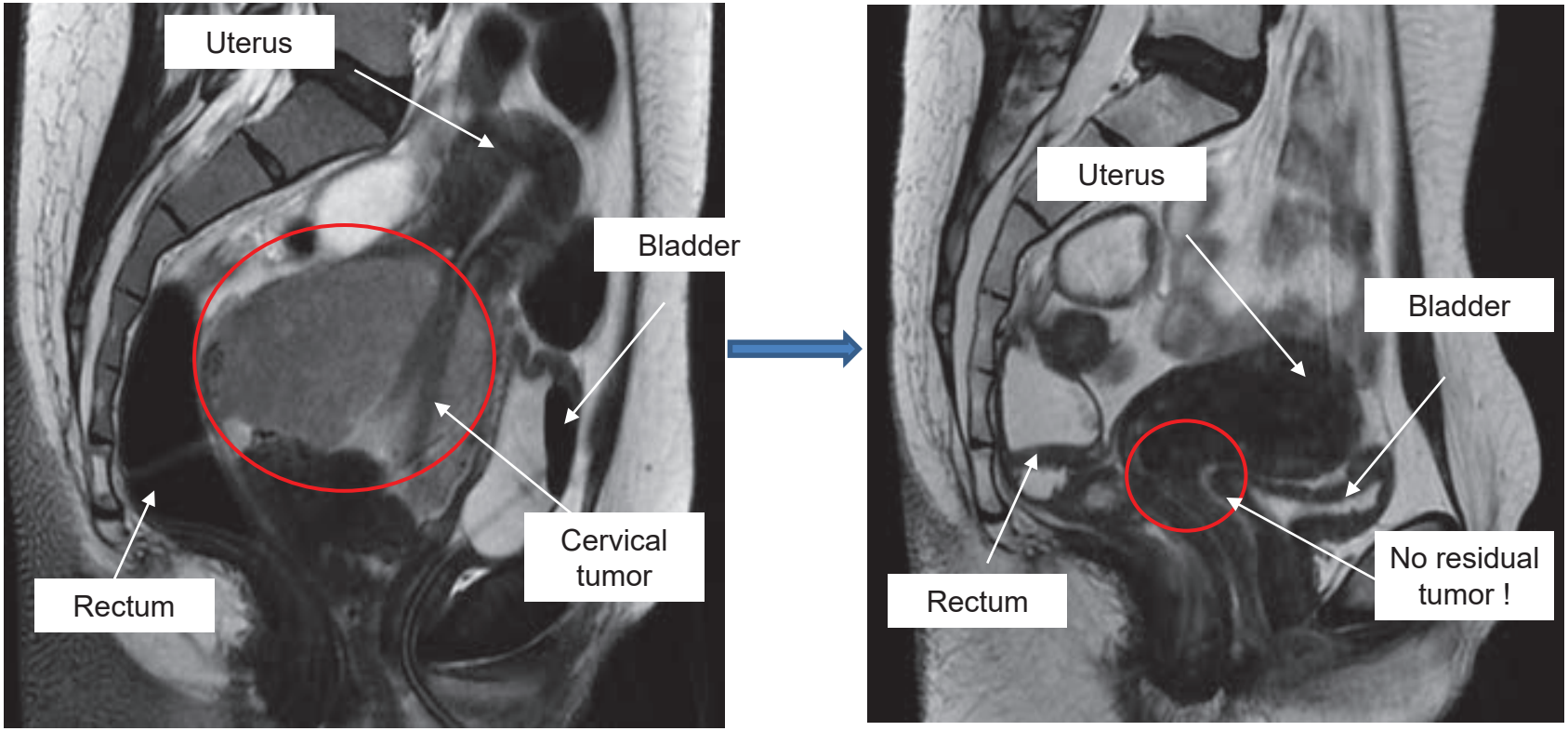
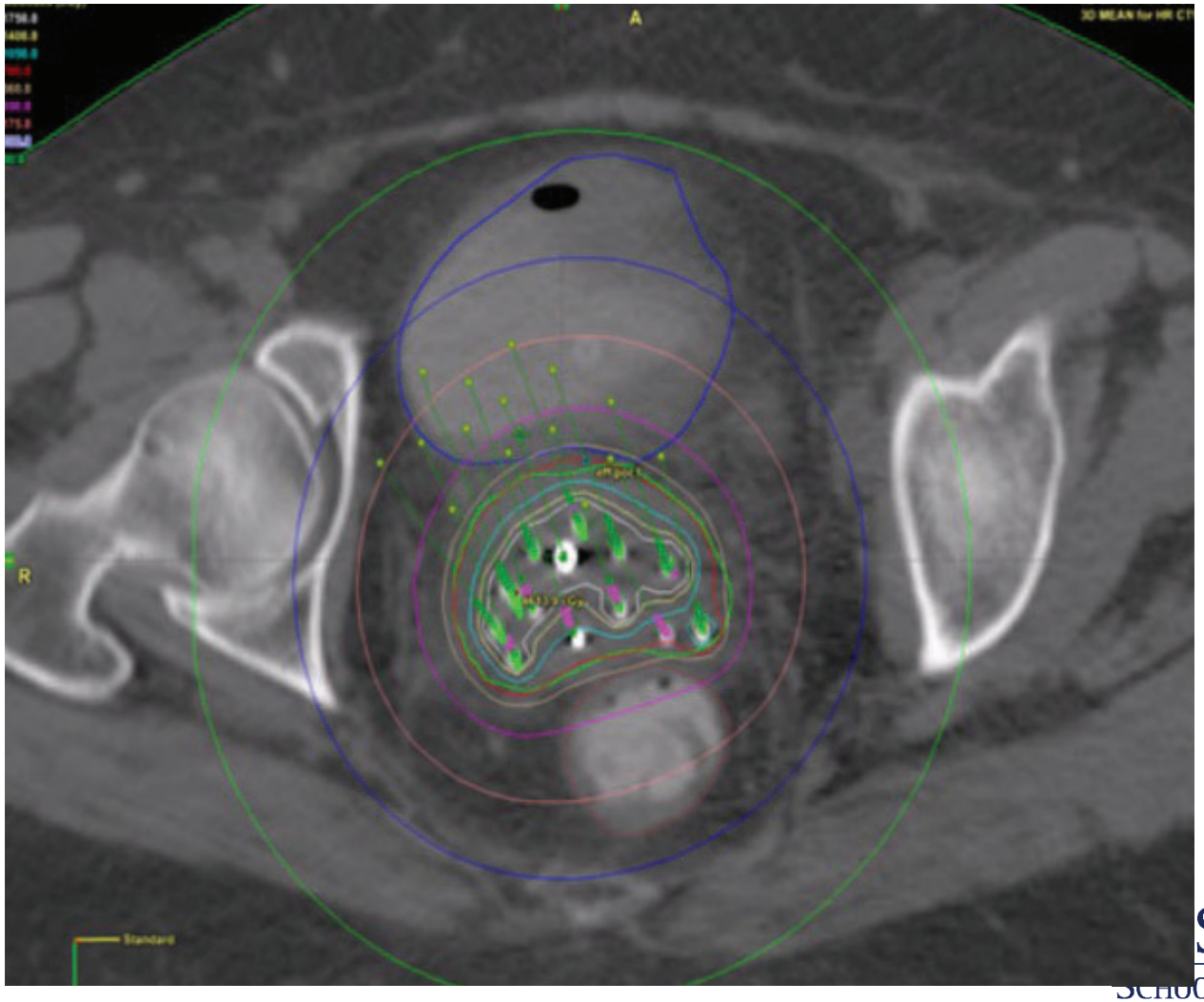
Sustained treatment effect for all?



After chemoradiaiton



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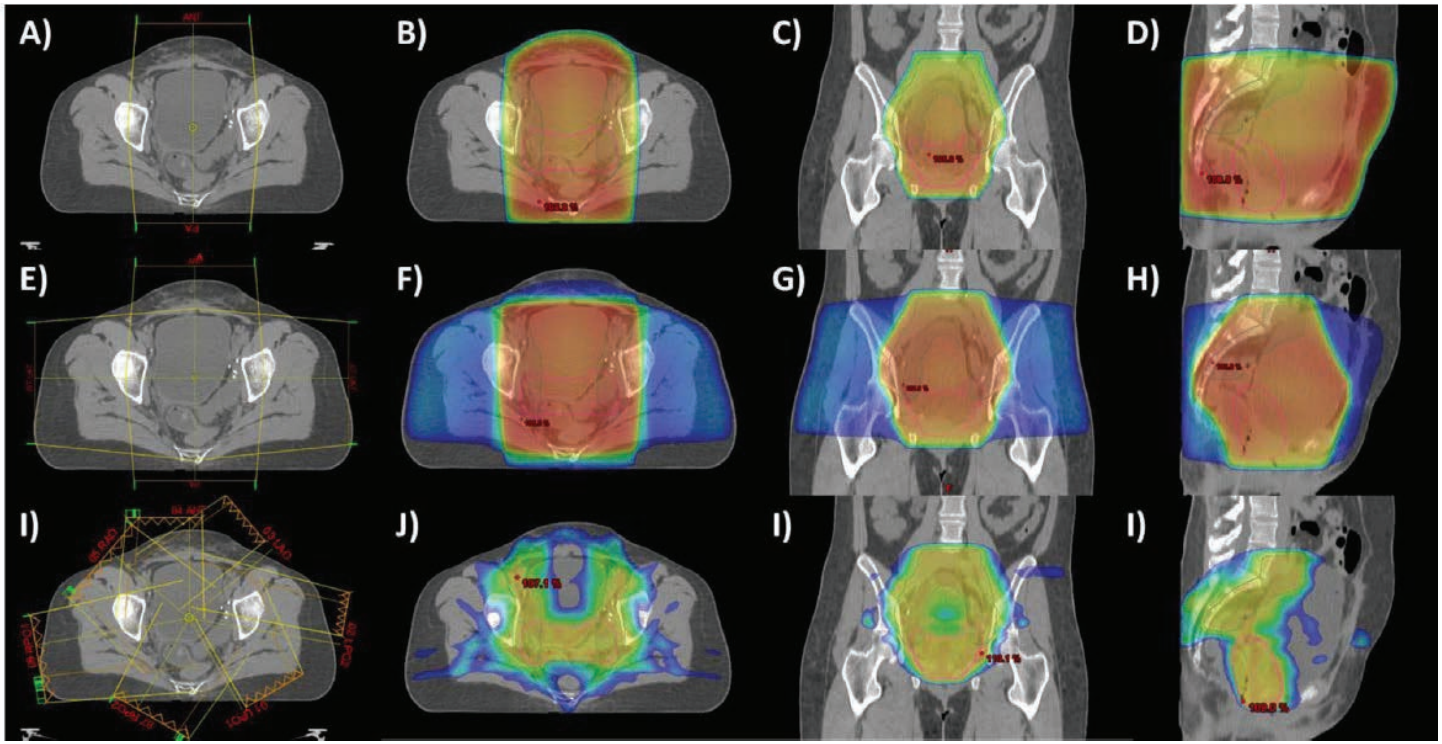
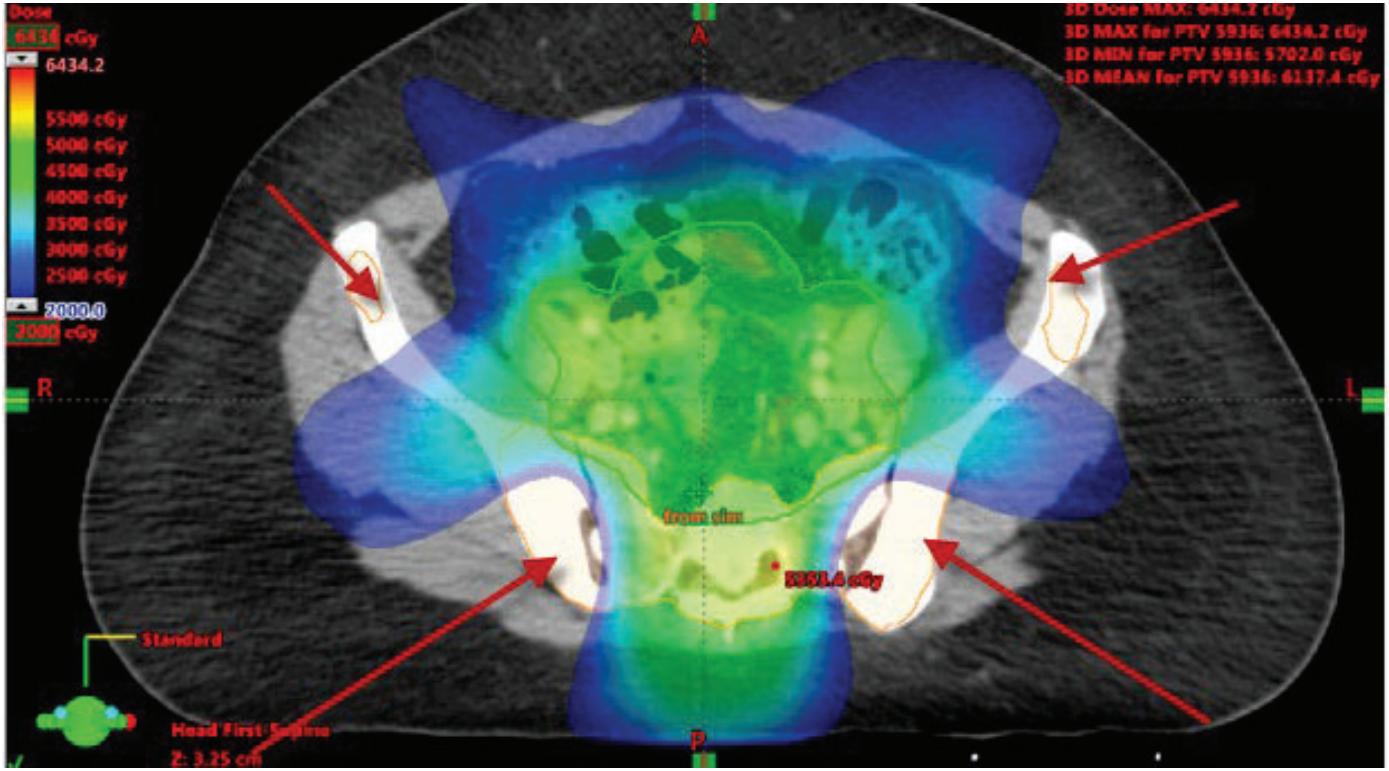
Radiation Strides: IMRT

- Dosimetric/clinical evidence, IMRT can reduce gastrointestinal, genitourinary, and hematological toxicities compared with 3D-conformal radiotherapy



Hymel et al. Critical Reviews in Hem/Onc
doi:10.1016/j.critrevonc.2014.12.015

IMRT: Technological Advances Through Clinical Trials



Mell et al. Int J Radiation Oncol Biol Phys 2017

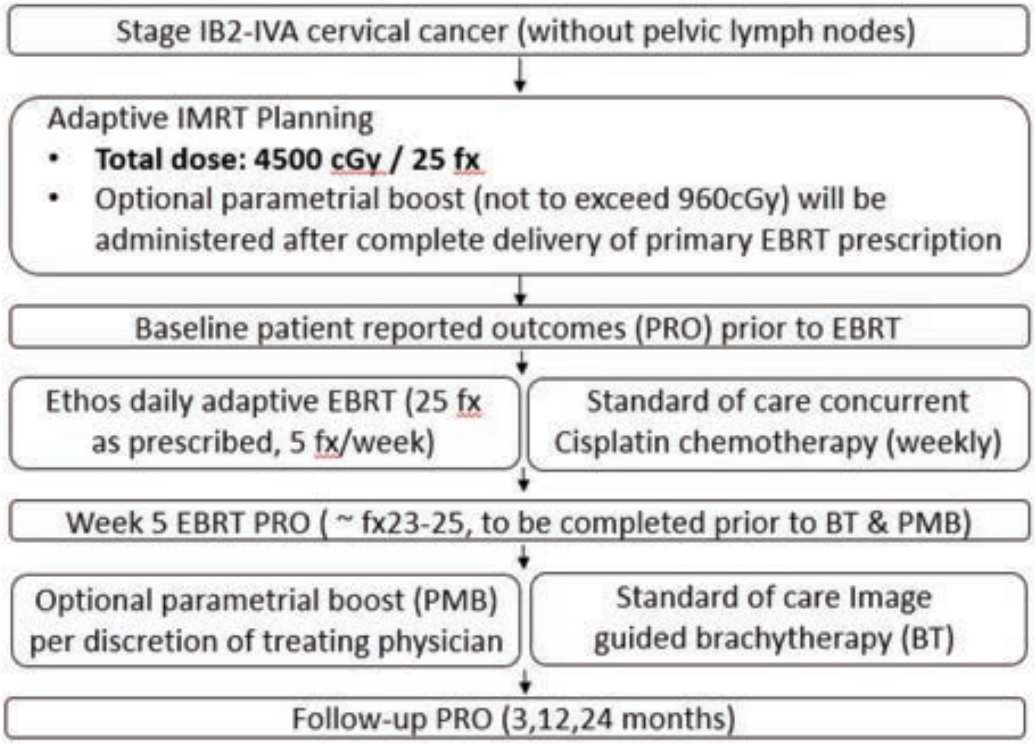
Mundt et al. Int J Radiat Oncol Biol Phys. 2002

ARTIA Cervix Adaptive Trial

ARTIA-Cervix (VAR-2021-04)
Protocol Document

ARTIA
Cervix Trial

STUDY SCHEMA

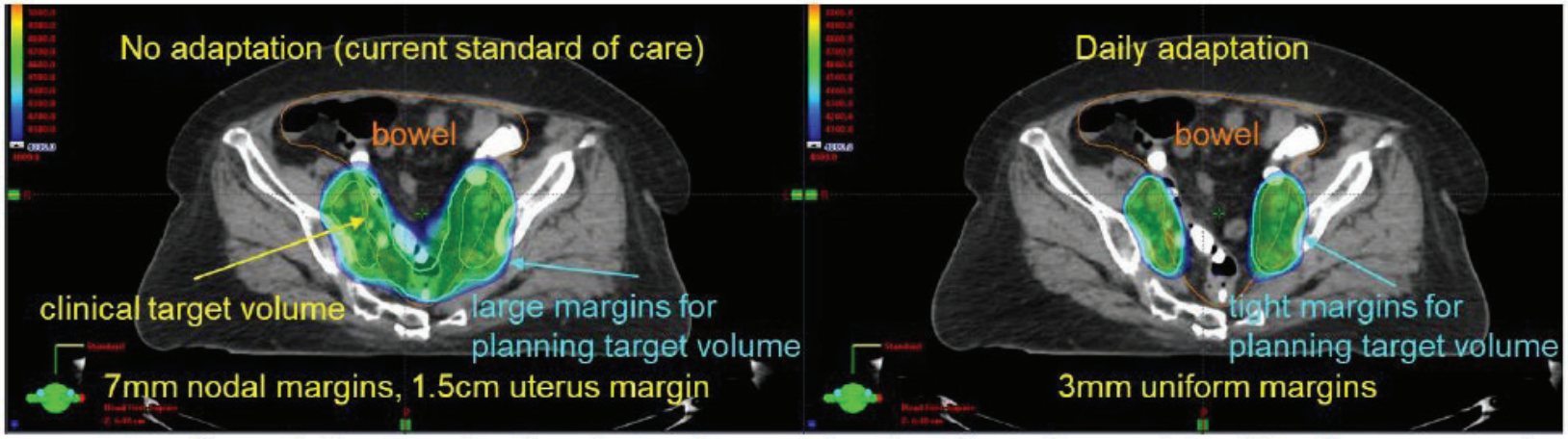


Definitions
BT: Brachytherapy
EBRT: External beam radiation therapy
IMRT: Intensity modulated radiation therapy
PMB: Parametrial boost
PRO: Patient reported outcome

Mayadev et al, IJROBP ; Issue 2, supplement e533, October 01, 2023

PI: Mayadev, ARTIA: Varian industry study, multi institutional

Adaptive Radiation Cervical Cancer



Bowel dose reduction from decreasing treatment margins. The 3 mm margins on the right can only be safely accomplished with daily adaptation to internal anatomical changes.

Mayadev et al, IJROBP ; Issue 2, supplement e533, October 01, 2023

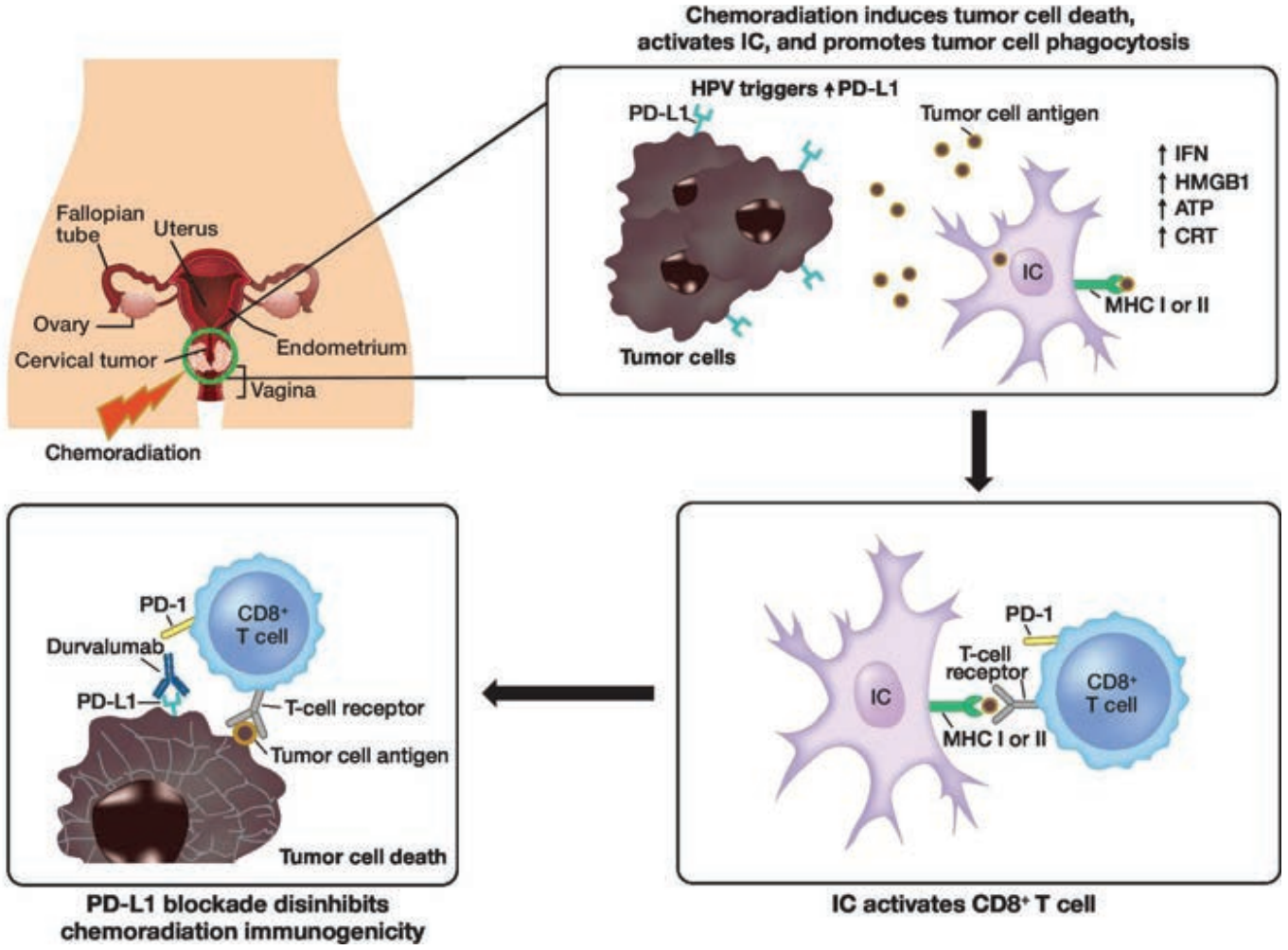


Figure 1; Mayadev et al., IJGC Vol 30, 2019
https://doi.org/10.1136/ijgc-2019-001135

GOG 9929: A PHASE I TRIAL OF SEQUENTIAL IPILIMUMAB AFTER CHEMORADIATION FOR THE PRIMARY TREATMENT OF PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER STAGES IB2/IIA WITH POSITIVE PARA-AORTIC LYMPH NODES ONLY AND STAGE IIB/IIIB/IVA WITH POSITIVE LYMPH NODES

Jyoti Mayadev, M.D. (Principal Investigator): NCI funded
Russell Schilder, M.D. (Mentor)
William Brady, PhD. (NRG Statistics)
Diane DaSilva, PhD. (Translational Component)

GOG 9929 Results

- 34 pts enrolled, 21 received at least 2 doses of ipi
- There were 2 pts/19 pts (9.5%) with acute grade 3 toxicity (lipase, rash), which self-resolved.
- Most of the acute toxicities were grade 1-2 GI distress, rash, endocrinopathies.
- 1 year OS 90%, PFS 81%.
- There was no difference in CD4 and CD8 T cell levels nor CTLA-4 expression with sequential ipi.
- CRT itself increased ICOS and PD-1 expression.

Mayadev et al., Jama Onc, Nov 2019

Immune Related Biomarkers

- PDL-1
- Immune

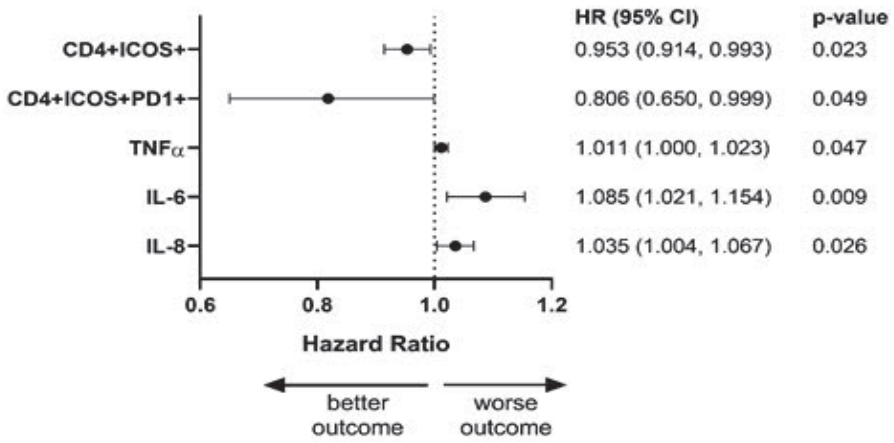


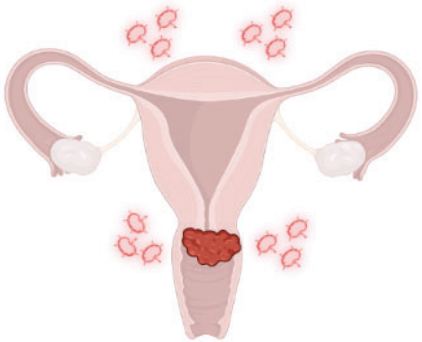
Figure 1. Association of changes in immune biomarkers with progression-free survival on GOG-9929. Increased changes (baseline to post-CRT values) in immune parameters were related to PFS using adjusted Cox proportional hazards models. Figure shows hazard ratios with 95% confidence intervals (lower limit, upper limit) and associated p-values for statistically significant associations found for immune activation markers and plasma cytokines. Expansion of the CD4+ICOS+ and CD4+ICOS+PD-1+ subsets post-CRT are associated with lower risk of progression while increases in inflammatory cytokines TNFa, IL-6, and IL-8 post-CRT are associated with higher risk of tumor progression.

DaSilva, Enserro, Mayadev et al. *Clinical Cancer Research* Nov 2020

NRG GY017: ANTI PD-L1 (ATEZOLIZUMAB) AS AN IMMUNE PRIMER AND CONCURRENTLY WITH EXTENDED FIELD CHEMORADIOTHERAPY FOR NODE POSITIVE LOCALLY ADVANCED CERVICAL CANCER

PI: Jyoti Mayadev, MD
Translational PI: Dmitriy Zamarin, MD, PhD
Collaboration CRADA: Genentech
Adaptive Biotechnologies
FUNDED: NCI/CTEP
NCI: CRDL AWARD: Mayadev

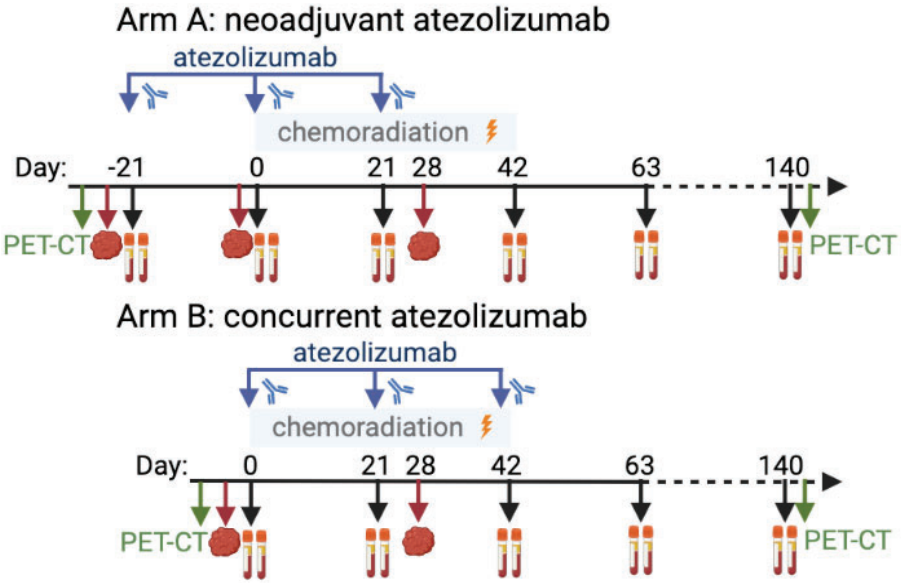
NRG-GY017: Neoadjuvant Atezolizumab and concurrent vs. concurrent with chemoradiation in patients with locally-advanced high-risk cervical cancer
PI: Mayadev



Cervical cancer:
Stage IB-IVA, +PALN
Stage IIB-IVA, + PLN, +/-PALN

Biopsy

Blood



N=40

In each arm, atezolizumab was administered for a total of 3 doses with no maintenance

Mayadev et al., *Nature Communications, Jan 2025*

NRG-GY017: Patient and tumor characteristics

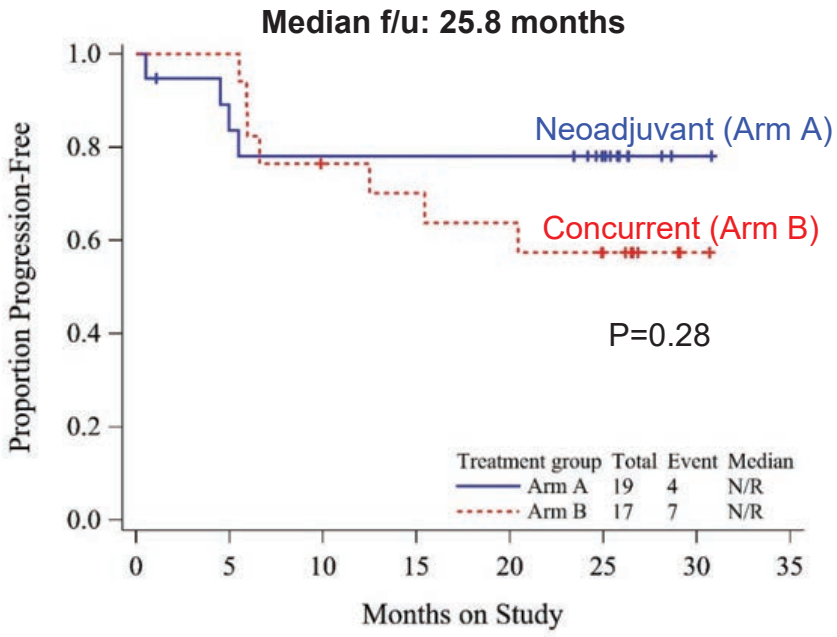
	Arm A (neoadjuvant) (n=19)	Arm B (concurrent) (n=17)	Total (n=36)	p value
Age (median, min-max)	56 (35-71)	43 (24-60)	47.5 (24-71)	<0.05
Ethnicity				<0.05
Hispanic or Latino	7 (36.8%)	1 (5.9%)	8 (22.2%)	
Not Hispanic or Latino	11 (57.9%)	16 (94.1%)	27 (75.0%)	
Not Reported	1 (5.3%)	0 (0.0%)	1 (2.8%)	
Race				ns
Black or African American	3 (15.8%)	4 (23.5%)	7 (19.4%)	
White	14 (73.7%)	13 (76.5%)	27 (75.0%)	
Not Reported	2 (10.5%)	0 (0.0%)	2 (5.6%)	
Performance status				ns
0	13 (68.4%)	13 (76.5%)	26 (72.2%)	
1	6 (31.6%)	4 (23.5%)	10 (27.8%)	
Histology				ns
Adenocarcinoma NOS	4 (21.1%)	1 (5.9%)	5 (13.9%)	
Adenosquamous	1 (5.3%)	2 (11.8%)	3 (8.3%)	
Squamous Cell Carcinoma	14 (73.7%)	14 (82.4%)	28 (77.8%)	
FIGO stage				ns
IB	3 (15.8%)	3 (17.6%)	6 (16.7%)	
IIB	12 (63.2%)	10 (58.8%)	22 (61.1%)	
IIIB	3 (15.8%)	4 (23.5%)	7 (19.4%)	
IVA	1 (5.3%)	0 (0.0%)	1 (2.8%)	

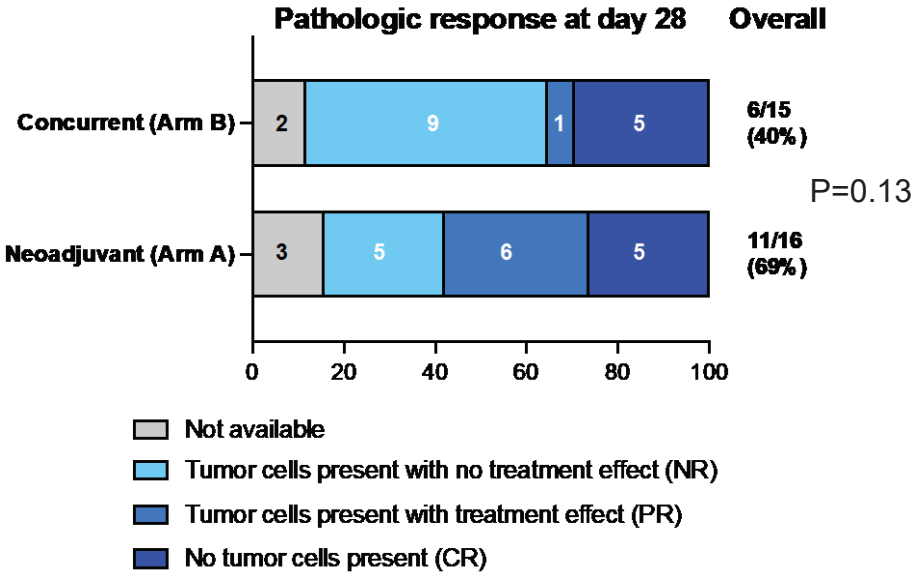
	Arm A (neoadjuvant) (n=19)	Arm B (concurrent) (n=17)	Total (n=36)	p value
Baseline PET/CT median SUV max for cervix	18.85	16.5	18.3	
Para-aortic lymph node metastases (PET/CT)				0.29
No	7 (36.8%)	10 (58.8%)	17 (47.2%)	
Yes	9 (47.4%)	5 (29.4%)	14 (38.9%)	
Not available	3 (15.8%)	2 (11.8%)	5 (13.9%)	
Pre-treatment PD-L1 (SP263) immune score				0.59
Negative (<1%)	2 (10.5%)	3 (17.6%)	5 (13.9%)	
Positive (≥1%)	8 (42.1%)	9 (52.9%)	17 (47.2%)	
missing	9 (47.4%)	5 (29.4%)	14 (38.9%)	
Pre-treatment PD-L1 (SP263) tumor cell score				0.02
Negative (<1%)	7 (36.8%)	2 (11.8%)	9 (25.0%)	
Positive (≥1%)	3 (15.8%)	10 (58.8%)	13 (36.1%)	
missing	9 (47.4%)	5 (29.4%)	14 (38.9%)	

*4 patients were randomized, but never received study treatment and were not eligible for the analyses.

Arm A (neoadjuvant) enrolled patients that were likely to be older, Hispanic or Latino, had lower PD-L1 tumor cell positivity, and had a higher proportion of PALN positivity* (*not statistically significant)

Clinical outcomes



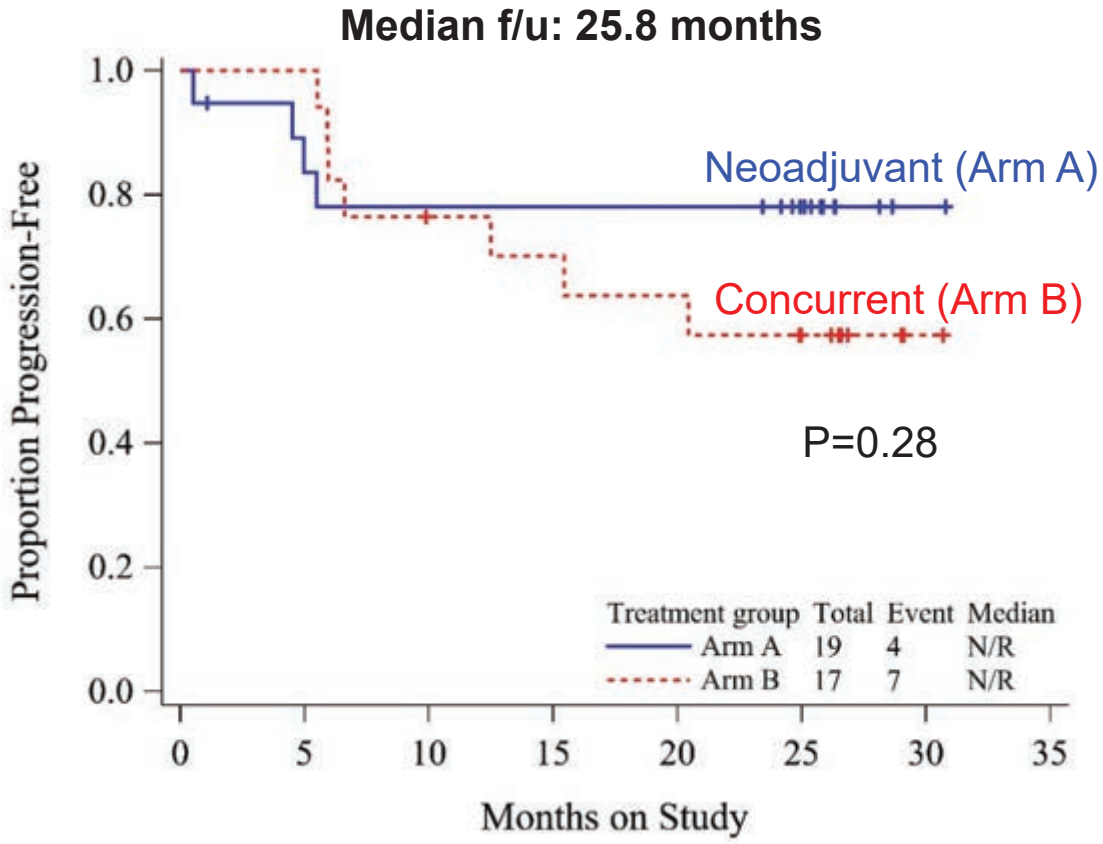


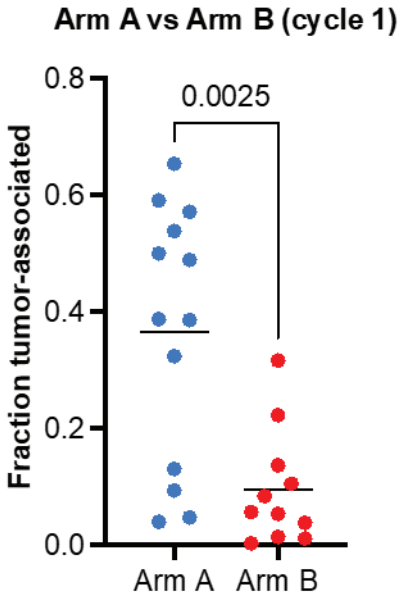
*Pathologic response assessment was performed after 3 doses of atezolizumab in Arm A vs. 2 doses of atezolizumab in arm B.

Spearman correlation coefficient between pathological response and 2-year DFS: 0.55 (p=0.0018)
There was no statistically-significant association between pre-treatment PD-L1 score and clinical outcomes.

Mayadev SGO 2022 Plenary ; Zamarin SGO 2023 Plenary

NRG GY017 Results

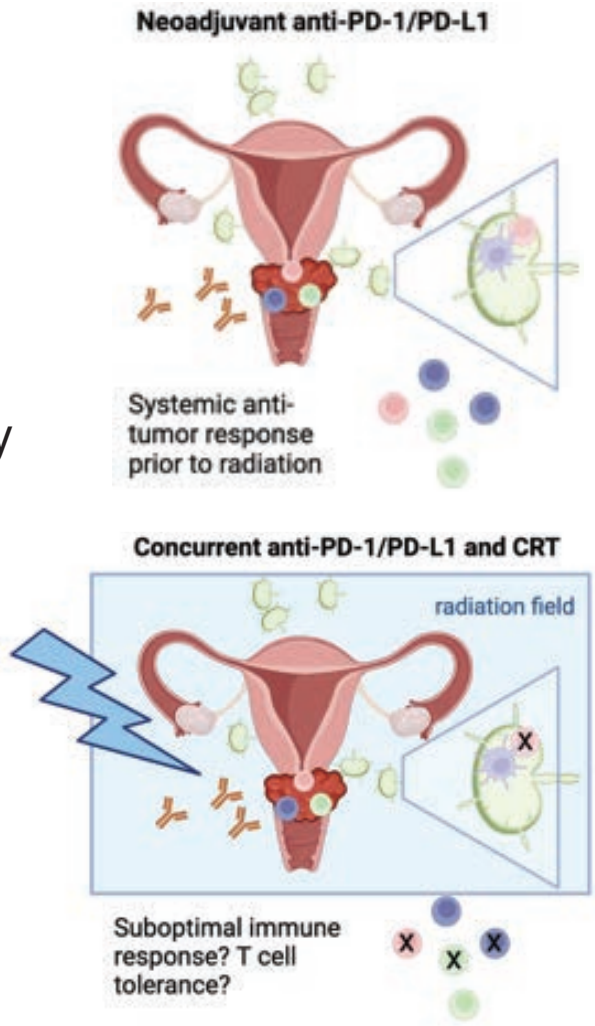




Mayadev et al., Nature Communications Jan 2025

Summary and conclusions

- Administration of atezolizumab with CRT resulted in a favorable 2-year DFS in both arms, with the atezolizumab priming arm (Arm A) trending toward superior pathological response and DFS.
- Neoadjuvant administration of atezolizumab led to early systemic expansion of tumor-associated TCR clones, possibly indicative of early systemic anti-tumor response
- CRT had minimal impact on tumor-associated TCR clones in concurrent CRT arm (Arm B) and resulted in contraction of atezolizumab-expanded tumor-associate TCR clones in Arm A, potentially implying deleterious consequences for the immune response

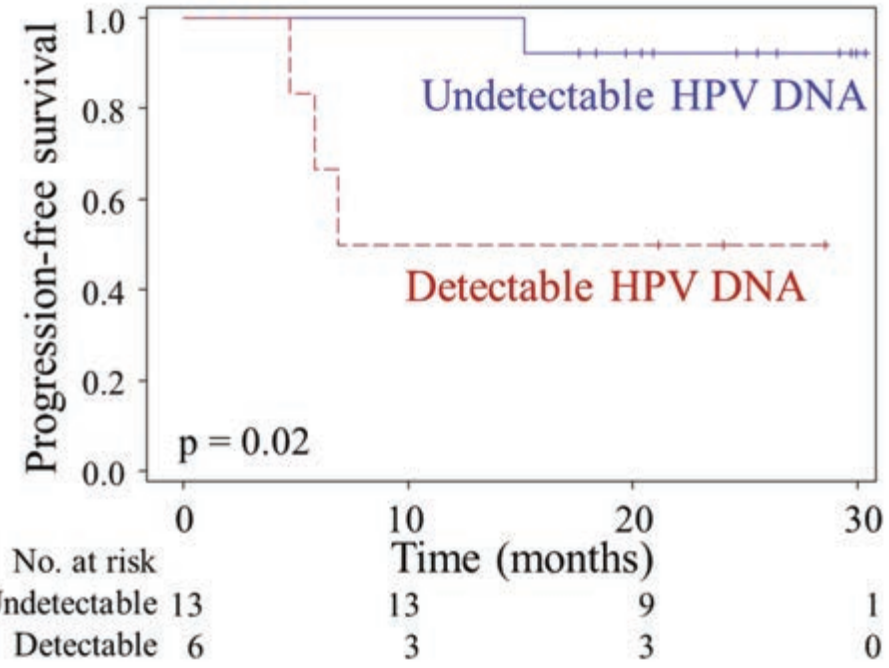


Mayadev SGO 2022 Plenary ; Zamarin SGO 2023 Plenary

ctDNA as a predictor for response

- Circulating tumor-derived HPV DNA as a predictive and prognostic biomarker in locally advanced node positive cervical cancer

- Data in HN SCCA ctDNA predictive for recurrence



Han et al, JCO Prec Oncol, 2018; 2:1-8

NCI R01 Subaward (Mayadev 2023-2026):
Prediction of ctDNA in locally advanced cervical cancer using biospecimens from NRG GY017

CALLA Study Design

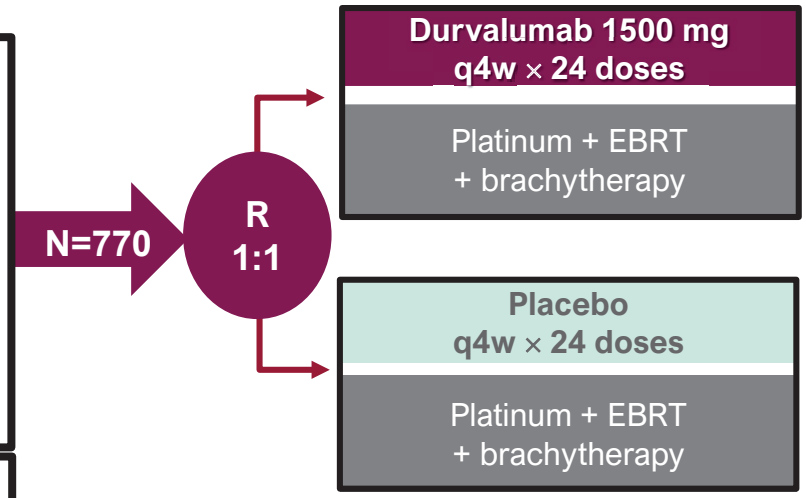
15 countries, **120** sites

Eligible population

- Women aged ≥18 years
- Histologically confirmed cervical adenocarcinoma, squamous carcinoma, or adenosquamous carcinoma
- High-risk LACC (FIGO 2009)
  - Stages IB2 to IIB, node positive (N≥1)
  - Stages IIIA to IVA with any node (N≥0)
- WHO ECOG performance status of 0 or 1

Stratification factors

- Disease stage
  - FIGO Stage IB2–IIB and LN+
  - FIGO Stage ≥III and LN–
  - FIGO Stage ≥III and LN+
- Region of world



Primary Endpoint:
Progression-Free Survival[a] (Investigator-assessed)

Key Secondary Endpoints:

- Overall survival
- Objective response rate
- Duration of response
- Incidence of local or distant progression / 2° malignancy
- Safety and tolerability

Chemoradiotherapy Regimen

Platinum agent	Cisplatin 40 mg/m^2 or carboplatin AUC2 q1w × 5 weeks
EBRT	45 Gy in 25 fractions at 1.8 Gy/fraction, 5 fractions per week
Brachytherapy	High-dose rate: 27.5–30 Gy; Low/pulsed-dose rate: 35–40 Gy

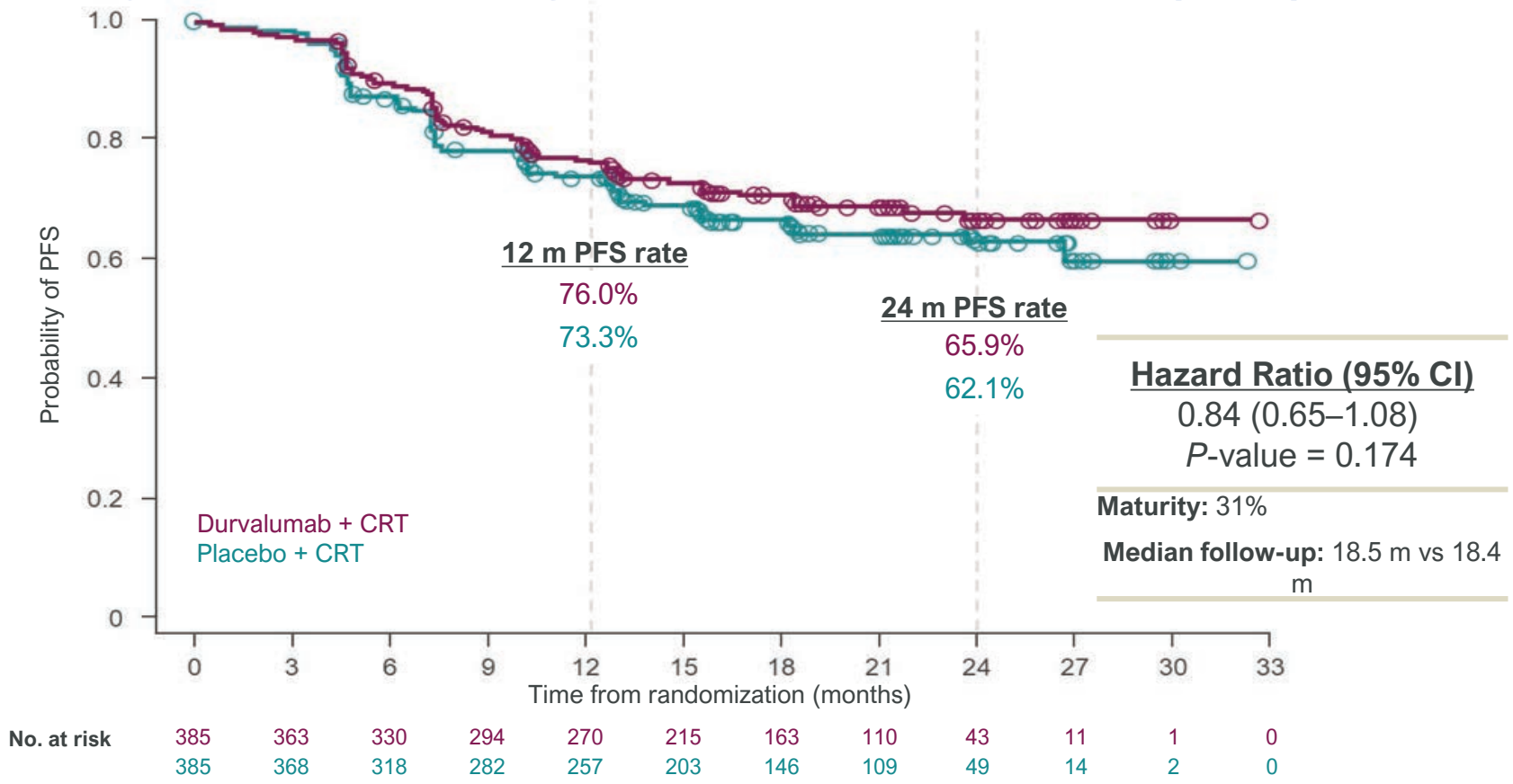
Key Milestones

First patient in February 2019 **Last patient in** December 2020 **Data cutoff** January 20, 2022

[a]According to RECIST 1.1 or histopathologic confirmation of local tumor progression.

Monk (first) Mayadev (senior) Lancet Oncology Dec 2023

Primary Endpoint: Progression-Free Survival (PFS)



Hazard Ratio (95% CI)
0.84 (0.65–1.08)
P-value = 0.174

Maturity: 31%

Median follow-up: 18.5 m vs 18.4 m

Monk (first) Mayadev (senior) Lancet Oncology Dec 2023

Early- and Late-Onset Radiotherapy Toxicities

Early-onset (≤1 year after last date of RT)

MedDRA Preferred Term >5% in both arms	Durvalumab + CRT (n = 385) All Grade n (%)	Durvalumab + CRT (n = 385) Grade ≥3 n (%)	Placebo + CRT (n = 384) All Grade n (%)	Placebo + CRT (n = 384) Grade ≥3 n (%)
Any AE possibly related to EBRT, BT, or both	**291 (75.6)**	**116 (30.2)**	**287 (74.7)**	**106 (27.6)**
Diarrhea	124 (32.2)	4 (1.0)	135 (35.2)	0 (0.0)
Anemia	106 (27.5)	43 (11.2)	108 (28.1)	32 (8.3)
Nausea	71 (18.4)	3 (0.8)	78 (20.3)	0 (0.0)
Neutrophil count decreased	59 (15.3)	22 (5.7)	70 (18.2)	27 (7.0)
White blood cell count decreased	60 (15.6)	37 (9.6)	70 (18.2)	40 (10.4)
Decreased appetite	44 (11.4)	4 (1.0)	36 (9.4)	0 (0.0)
Vomiting	44 (11.4)	1 (0.3)	51 (13.3)	1 (0.3)
Platelet count decreased	37 (9.6)	7 (1.8)	51 (13.3)	9 (2.3)
Neutropenia	28 (7.3)	14 (3.6)	28 (7.3)	8 (2.1)
Constipation	23 (6.0)	0 (0.0)	27 (7.0)	0 (0.0)
Weight decreased	23 (6.0)	1 (0.3)	26 (6.8)	1 (0.3)

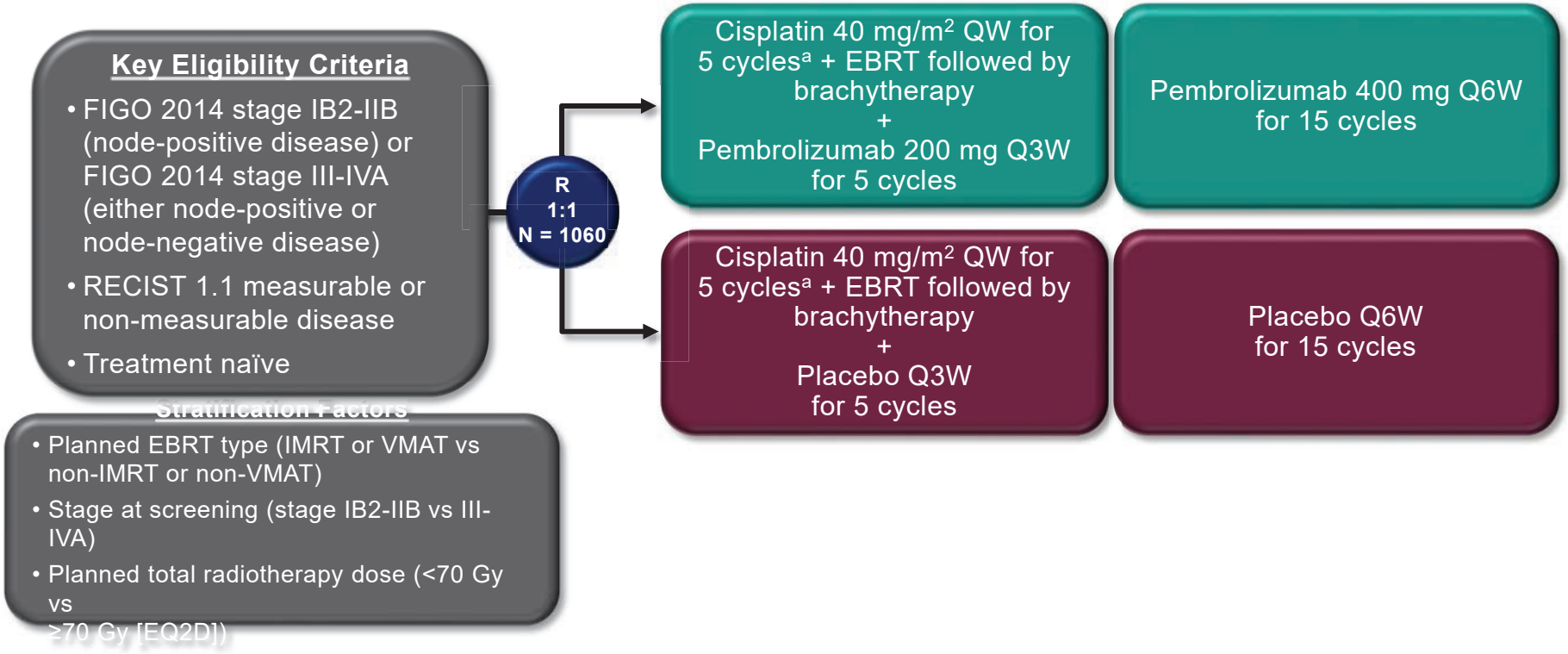
Late-onset (>1 year after last date of RT)

MedDRA Preferred Term ≥1% in any arm	Durvalumab + CRT (n = 385) All Grade n (%)	Durvalumab + CRT (n = 385) Grade ≥3 n (%)	Placebo + CRT (n = 384) All Grade n (%)	Placebo + CRT (n = 384) Grade ≥3 n (%)
Any AE possibly related to EBRT, BT or both	**37 (9.6)**	**7 (1.9)**	**36 (9.4)**	**4 (1.0)**
Rectal hemorrhage	5 (1.3)	0 (0.0)	1 (0.3)	0 (0.0)
Gastroenteritis radiation	5 (1.3)	0 (0.0)	1 (0.3)	1 (0.3)
Radiation proctitis	4 (1.0)	1 (0.3)	6 (1.6)	0 (0.0)
Urinary incontinence	4 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)
Cystitis radiation	0 (0.0)	0 (0.0)	4 (1.0)	2 (0.5)
Urinary tract infection	2 (0.5)	1 (0.3)[a]	0 (0.0)	0 (0.0)

[a] Grade 5 event.

Mayadev et al., ASTRO 2022 Plenary

ENGOT-cx11/GOG-3047/KEYNOTE-A18: Randomized, Double-Blind, Phase 3 Study



[a]A 6th cycle was allowed per investigator discretion. EBRT, external beam radiotherapy; FIGO, International Federation of Gynecology and Obstetrics; Gy, grays; IMRT, intensity-modulated radiotherapy; Q3W, every 3 weeks; Q6W, every 6 weeks; RECIST, Response Evaluation Criteria in Solid Tumors; VMAT, volumetric-modulated arc therapy. ENGOT-cx11/GOG-3047/KEYNOTE-A18 ClinicalTrials.gov identifier, NCT04221945.

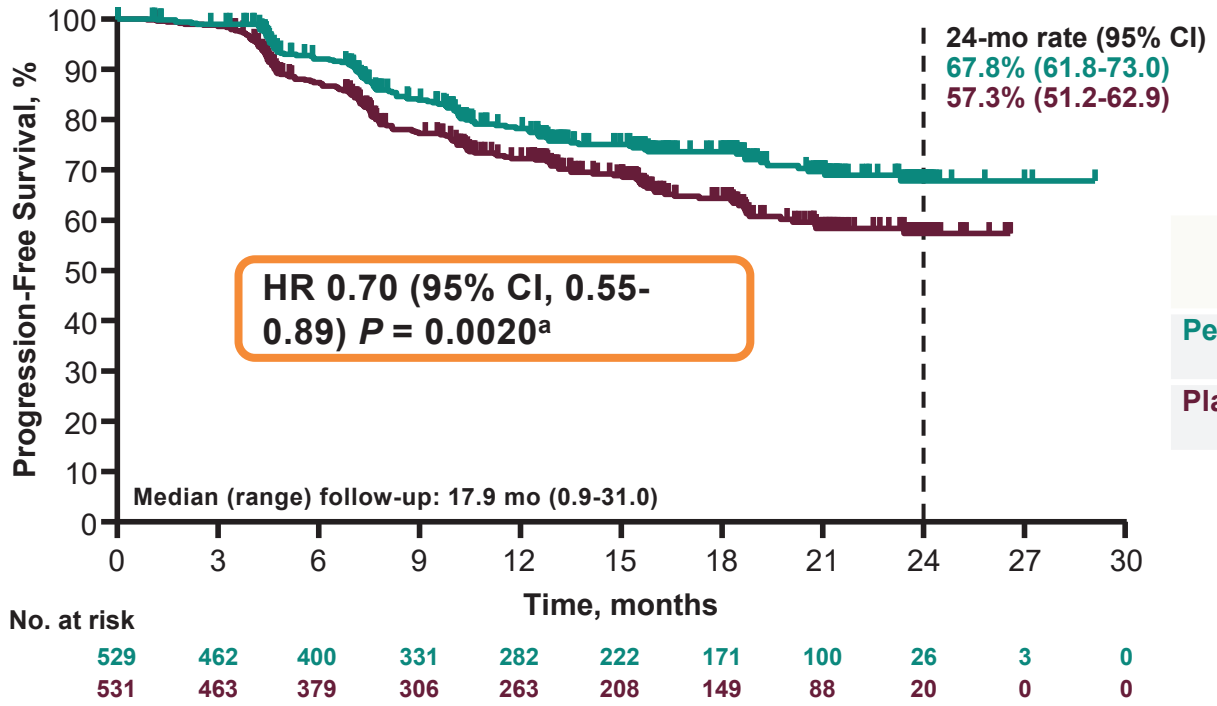
Baseline Characteristics

	Pembro Arm (N = 529)	Placebo Arm (N = 531)
Age, median (range)	49 y (22-87)	50 y (22-78)
Race[a]		
White	254 (48.0%)	264 (49.7%)
Asian	155 (29.3%)	148 (27.9%)
Multiple	78 (14.7%)	86 (16.2%)
American Indian or Alaska Native	24 (4.5%)	22 (4.1%)
Black or African American	14 (2.6%)	8 (1.5%)
Native Hawaiian or Other Pacific Islander	2 (0.4%)	1 (0.2%)
PD-L1 CPS		
<1	22 (4.2%)	28 (5.3%)
≥1	502 (94.9%)	498 (93.8%)
Missing	5 (0.9%)	5 (0.9%)
ECOG PS 1	149 (28.2%)	134 (25.2%)
Squamous cell carcinoma	433 (81.9%)	451 (84.9%)

	Pembro Arm (N = 529)	Placebo Arm (N = 531)
Stage at screening (FIGO 2014 criteria)		
IB2-IIB	235 (44.4%)	227 (42.7%)
III-IVA	294 (55.6%)	304 (57.3%)
Lymph node involvement[b]		
Positive pelvic only	326 (61.6%)	324 (61.0%)
Positive para-aortic only	14 (2.6%)	10 (1.9%)
Positive pelvic and para-aortic	105 (19.8%)	104 (19.6%)
No positive pelvic or para-aortic	84 (15.9%)	93 (17.5%)
Planned type of EBRT		
IMRT or VMAT	469 (88.7%)	470 (88.5%)
Non-IMRT and non-VMAT	60 (11.3%)	61 (11.5%)
Planned total radiotherapy dose (EQD2)		
<70 Gy	47 (8.9)	46 (8.7)
≥70 Gy	482 (91.1)	485 (91.3)

[a]In each treatment arm, 2 patients (0.4%) had missing information for race. [b]Per protocol, a positive lymph node is defined as ≥1.5 cm shortest dimension by MRI or CT. Data cutoff date: January 9, 2023.

Primary Endpoint: Progression-Free Survival



	Pts w/ Event	Median, mo (95% CI)
Pembro Arm	21.7%	NR (NR-NR)
Placebo Arm	29.0%	NR (NR-NR)

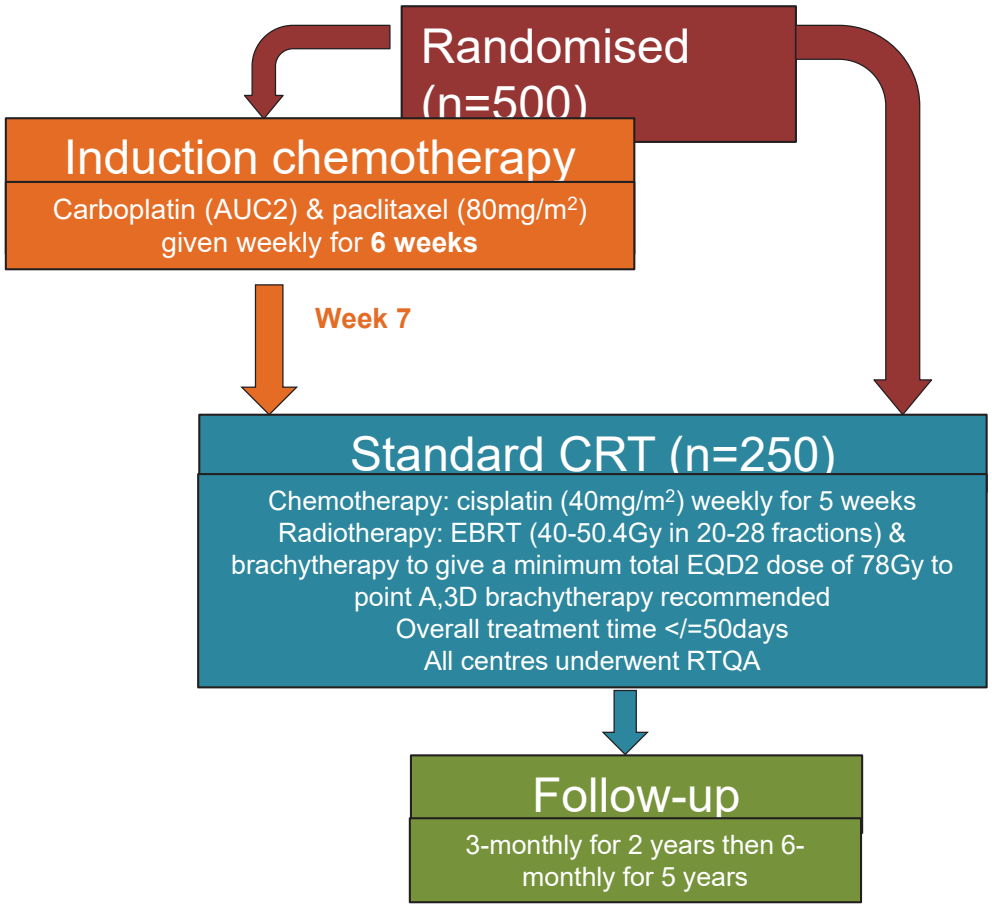
Response assessed per RECIST v1.1 by investigator review or histopathologic confirmation. [a]With 269 events (88.5% information fraction), the observed *P* = 0.0020 (1-sided) crossed the prespecified nominal boundary of 0.0172 (1-sided) at this planned first interim analysis. The success criterion of the PFS hypothesis was met, and thus no formal testing of PFS will be performed at a later analysis. Data cutoff date: January 9, 2023.

INTERLACE Trial Design

Key eligibility criteria

- Newly diagnosed histologically confirmed FIGO (2008) stage IB1 node+,IB2 ,II,IIIB,IVa squamous, adeno, adenosquamous cervical cancer
- No nodes above aortic bifurcation
- Adequate renal/liver and bone marrow function
- Fit for chemotherapy & radical RT
- No prior pelvic RT

RT=Radiation
IMRT=Intensity modulated radiation
EBRT=External beam radiation
BT= Brachytherapy
RTQA=Radiation quality assurance



Stratified by

- Site
- Stage
- Nodal status
- 3D v IMRT EBRT
- 2D v 3D BT
- Tumour size
- SCC v other

Primary endpoints

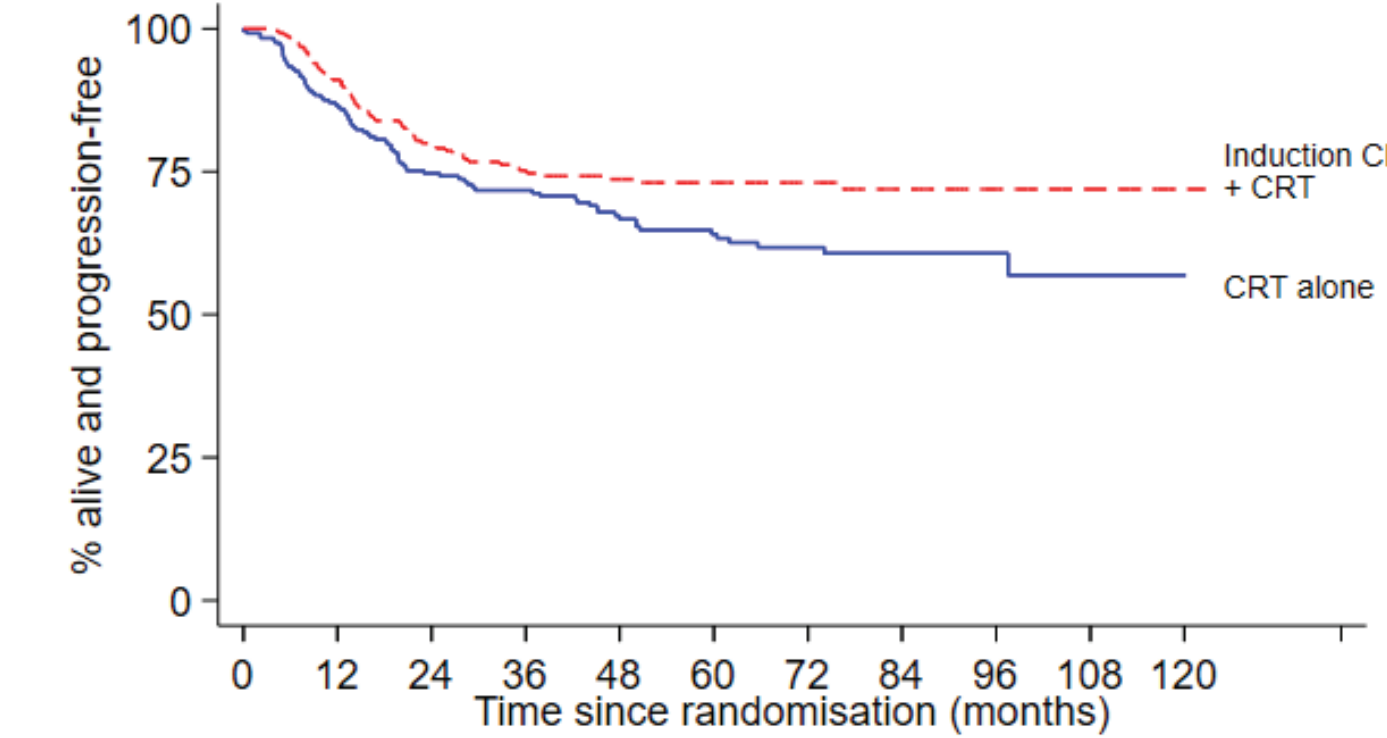
- PFS
- OS

Secondary endpoints

- Adverse events
- Pattern of relapse
- QOL
- Time to subsequent treatment

Mary McCormack

INTERLACE Progression-Free Survival (median FU 64m)



146 PFS events
HR 0.65;95% CI:0.46 -0.91
P=0.013

	Induction Chemo+ CRT (n=250)	CRT alone (n=250)
3yr PFS	75%	72%
5yr PFS	73%	64%

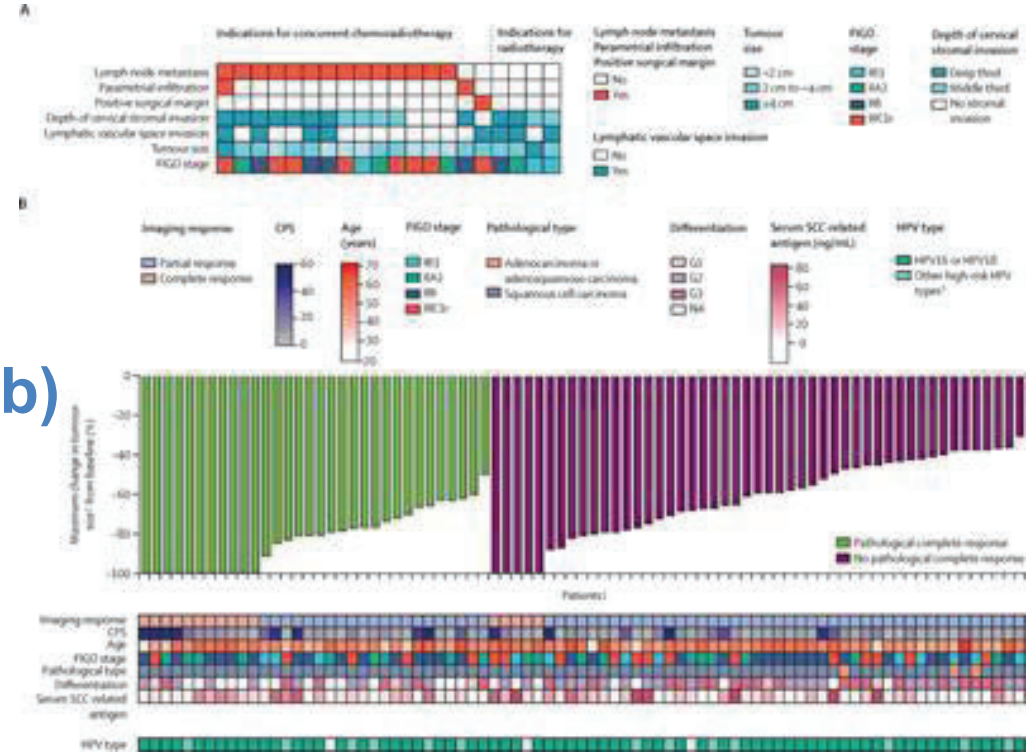
Number at risk

CRT alone	250	204	157	140	110	88	63	36	16	5	1
Induction Chemo + CRT	250	220	178	152	132	105	72	40	19	8	1

Mary McCormack

NACI study: neoadjuvant IO/chemotherapy

85 pts China
LACC
Chemo and chemo/IO
Cisplatin/nab-paclitaxel
(cycle 2, 3 w camrelizumab)
Surgery
ORR 98% (19% pCR)



No baseline sig feature correlation for pCR

Li K, Chen J, Hu Y, et al: Neoadjuvant chemotherapy plus camrelizumab…
Lancet Oncol 25:76-85, 2024

PACS study: neoadjuvant IO/chemotherapy

Lui et al, ASCO 2024

PACS study

PACS: study design (NCT04799639)

Key eligibility criteria:
- Age: 18-65 years old
- Newly pathologically confirmed adenocarcinoma, adeno-squamous carcinoma, or squamous-cell carcinoma of the cervix
- No previous treatment
- Stage IB3 or IIA2 (FIGO 2018)
- Measurable lesion ≥3.5cm by MRI
- ECOG PS ≤1

Neoadjuvant therapy

Cisplatin (70mg/m^2, iv)
+Paclitaxel (150mg/m^2, iv)
+Sintilimab (200mg, iv)
Q3W 3 Cycles*

* Pts evaluated PD without distant metastases after 2 cycles of neoadjuvant therapy underwent surgery immediately.

Open radical surgery (Type C)

Adjuvant therapy:
- according to NCCN Clinical Practice Guidelines in Cervical Cancer
- If there is no indication for radiotherapy, monotherapy with sintilimab (200mg,iv, Q3W, 3 cycles) was given.

Statistical design:
Use Simon's two-stage method to estimate sample size. Assuming an increase in pCR rate from 10% (H0) to 25% (H1), one-sided alpha level of 0.05, the first stage enrollment of 18 patients conferred 80% power to rule out the null hypothesis. If two patients reach pCR in the first stage, the second stage continues enrolling up to 47 patients (including 10% dropout rate).

Primary endpoint:
pCR rate

Secondary endpoint:
Objective response rate (ORR)
Optimal remission rate (OPR)
Disease-free survival (DFS)
2y DFS rate
Safety

2024 ASCO ANNUAL MEETING #ASCO24 PRESENTED BY: Dr. Jihong Liu

Primary endpt: 36% pCR; 57% pPR

CV2401 (NRG 037) : NEOADJUVANT PEMBROLIZUMAB AND CHEMOTHERAPY AND CHEMORADIATION VS. CHEMORADIATION FOLLOWED BY PEMBROLIZUMAB FOR LOCALLY ADVANCED CERVICAL CANCER

PI: Jyoti Mayadev, MD

Translational PI: Dmitriy Zamarin, MD, PhD

Statistician: Wei Deng, PhD

Collaboration: CRADA (Merck)

N= 280

1:1

Power: 80%
Alpha 10%

- Newly diagnosed histologically confirmed FIGO (2018) stage IIIA (T3aN0), Stage IIIB (T3bN0), Stage IIIC1(T3AN1, T3BN1); IIIC2 (T3A N2,T3BN2); IVA (Stage T4aN0-N2)
- Squamous cell, adenocarcinoma, adenosquamous cervical cancer

Cisplatin 40 mg/m^2 QW for 6 cycles + EBRT followed by brachytherapy
+
Pembrolizumab 200 mg Q3W for 5 cycles

Pembrolizumab 400 mg Q6W for 15 cycles

Neoadjuvant chemotherapy carboplatin (AUC 2)+ paclitaxel (80mg/m2) wkly (6 wks) + pembrolizumab 200mg q 3wks
2 cycles (6 wks)

Cisplatin 40 mg/m^2 QW for 6 cycles + EBRT followed by brachytherapy
+
Pembrolizumab 200 mg Q3W for 5 cycles

Pembrolizumab 400 mg Q6W for 13 cycles

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- Zamarin Lab (NRG/Mt Sinai)
- Talke Lab (UCSD ENG): Talke, Morris, Makale, Chen, Yi , students
- NRG Oncology collaborations: Moore, Henson, Leath, Aghajanian, Lea
- UCSD RMAS: Rash, Mell, Yashar, Mundt, Nwachukwu, Sharabi, Advani, Scanderbeg, Brown, Myers, Kisling, Meng, Sanghvi
- UCSD RMAS residents: Kim, Dornish (and many previous residents)
- COE: McDaniels-Davidson, Martinez, Nodora, Margaux SB
- GYN ONC: McHale, Eskander, Binder, Plaxe, Saenz
- LJI : Sharma Lab, Vijay Lab
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- NRG/NCI, AZ, Merck, Varian, Adaptive,
- Genentech
- Clinical Support
- Heather Naylor, Brachy Team, HDR Nursing
- Lisa Kirsch
- PATIENTS

CHIKA NWACHUKWU, MD, PHD

UC San Diego Health, Radiation Oncologist and Assistant Professor in the Division of Radiation Oncology

Advances in Radiation Therapy

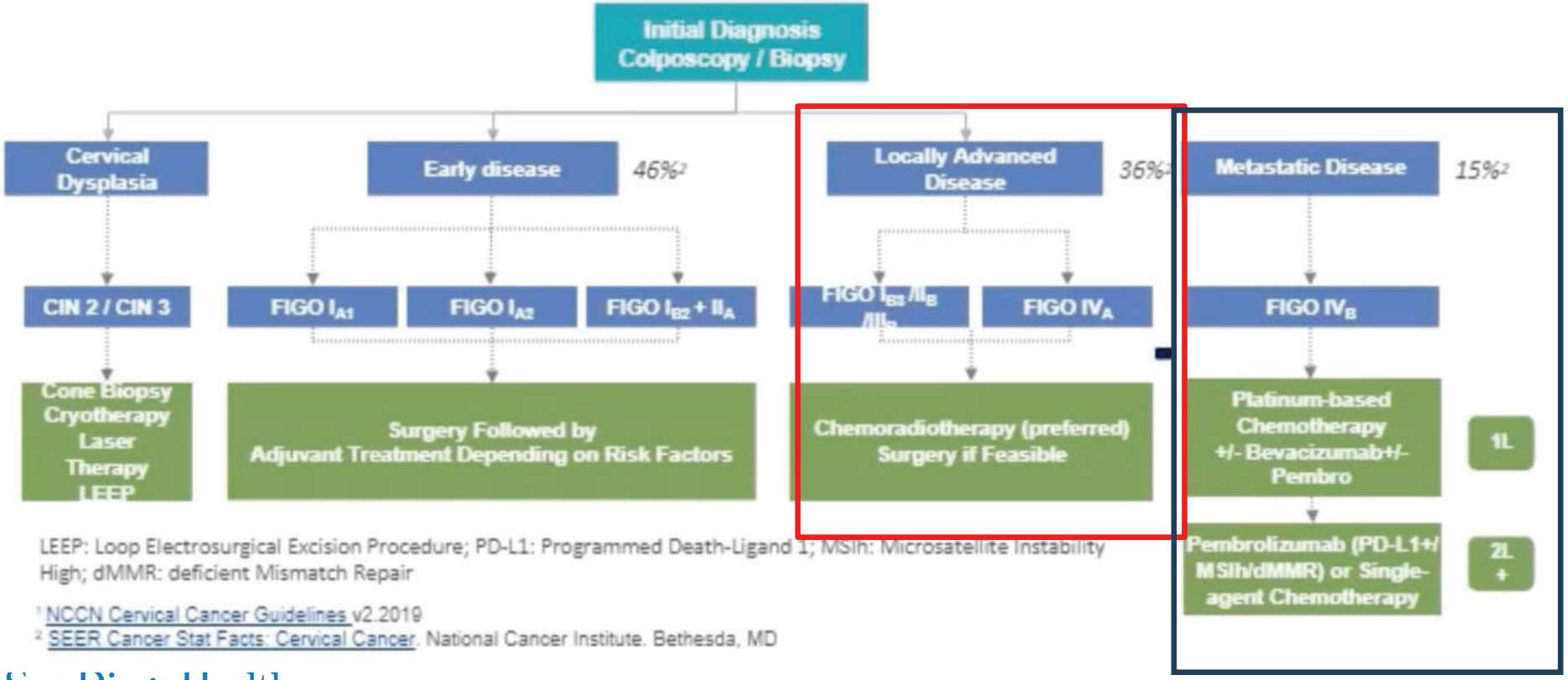
UC San Diego
MOORES CANCER CENTER
Community Outreach and Engagement

Radiation Advances for Cervical Cancer

Chika Nwachukwu, MD, PhD
Assistant Professor
Radiation Medicine & Applied Sciences
Jan 27, 2025

UC San Diego Health

Cervical Cancer Treatment Summary



LEEP: Loop Electrosurgical Excision Procedure; PD-L1: Programmed Death-Ligand 1; MSIh: Microsatellite Instability High; dMMR: deficient Mismatch Repair

[1] NCCN Cervical Cancer Guidelines v2.2019

[2] SEER Cancer Stat Facts: Cervical Cancer. National Cancer Institute. Bethesda, MD

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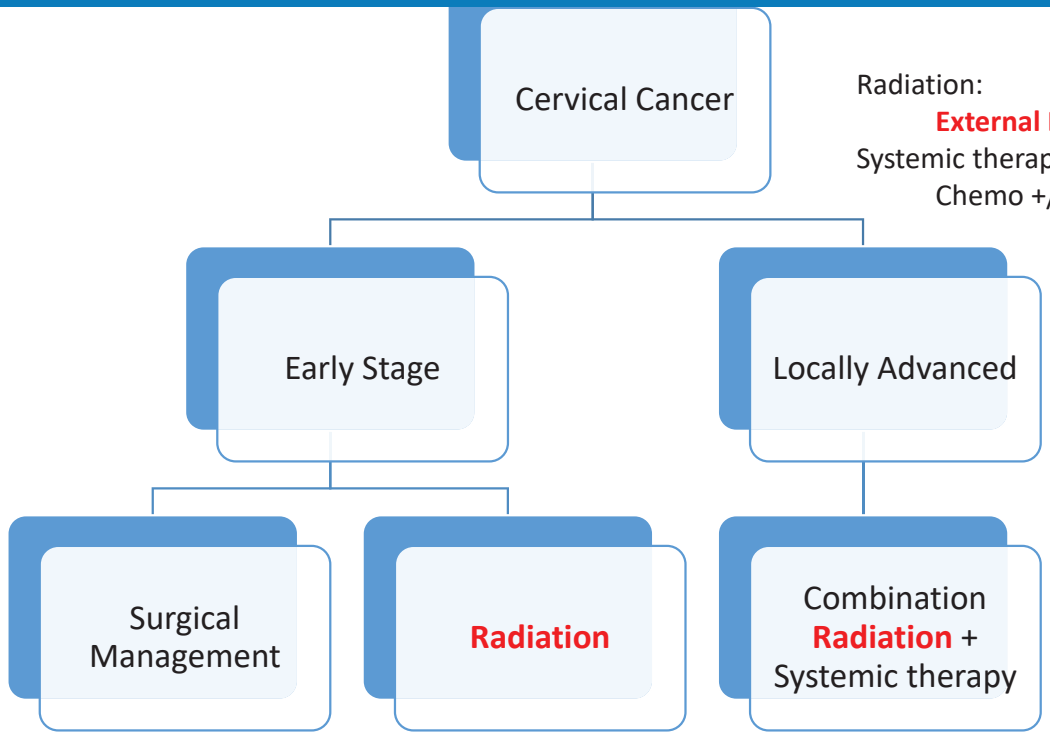
General Management of Cervical Cancer



Radiation:
External Beam Radiation +/- Brachytherapy
Systemic therapy:
Chemo +/- Immunotherapy

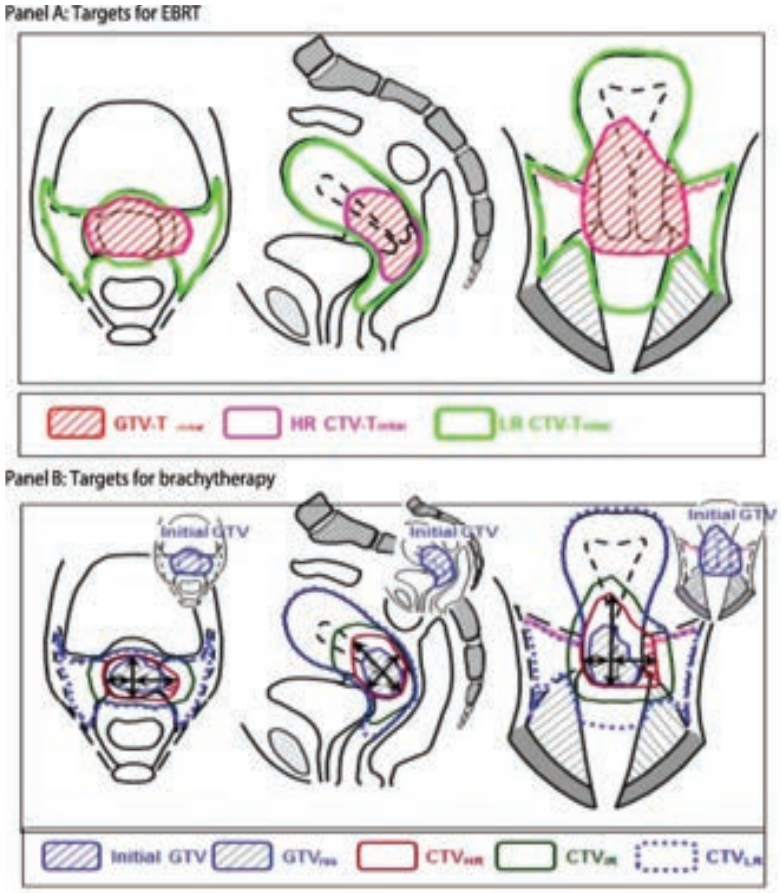
Radiation for Cervical Cancer

External Beam Radiation Therapy (EBRT)

3-Dimensional Conformal Radiation Therapy (3D-CRT), Intensity Modulated Radiation Therapy (IMRT), Image-Guided Radiation Therapy (IGRT), Stereotactic Body Radiation Therapy (SBRT)

Brachytherapy

3-Dimensional brachytherapy(3D-), Image-Guided Brachytherapy (IGBT),



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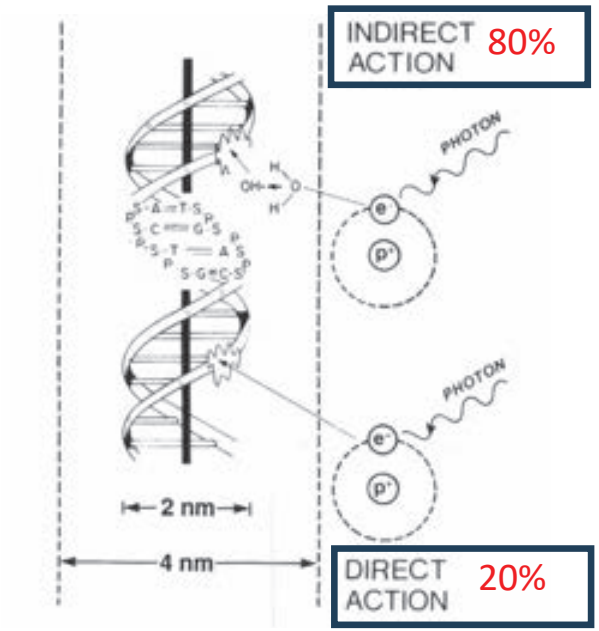
How Radiation Therapy (RT) works



X-rays interact with **water**

↓

radiolysis

↓

free radicals

↓

bind to and damages **DNA**

↓

mitotic catastrophe

↓

cell death

Cancer cells are more susceptible to RT due to impaired DNA repair pathways

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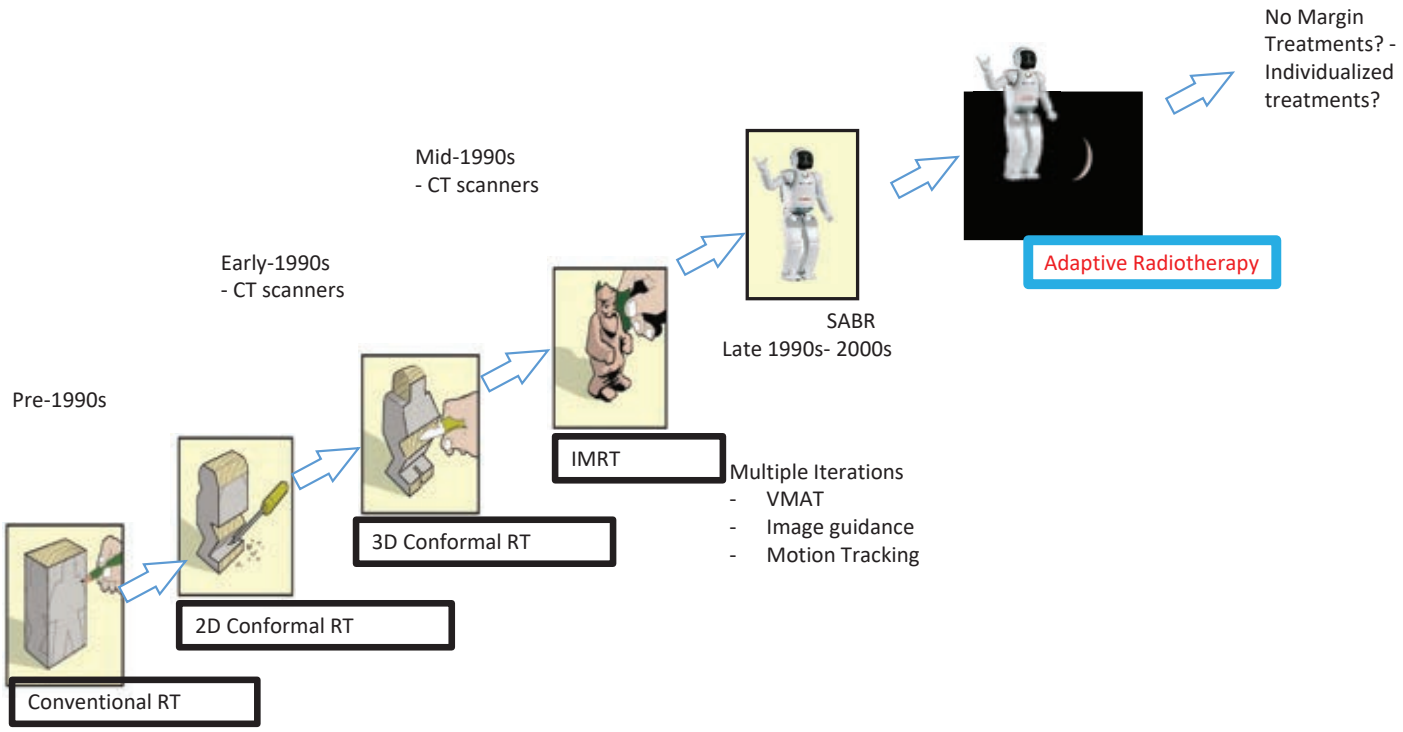
Milestones in Radiotherapy



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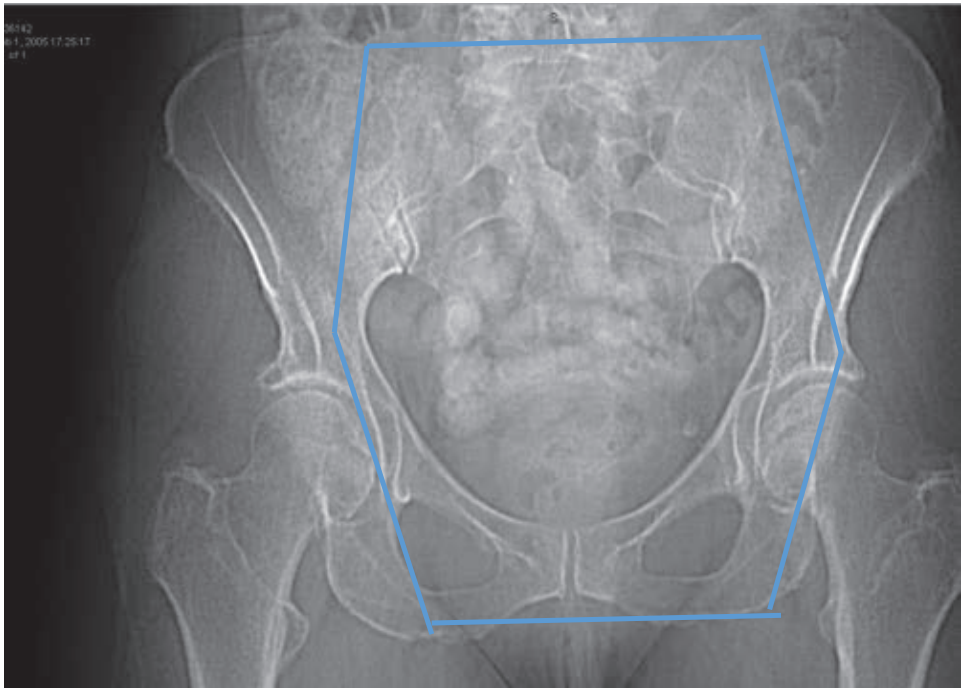
Management of Cervical Cancer in 1980s



- Dosing: 45-50GY
- Fields : based on bony anatomy
- No routine of PET/CT or high-quality imaging
- No Immunotherapy or targeted therapy

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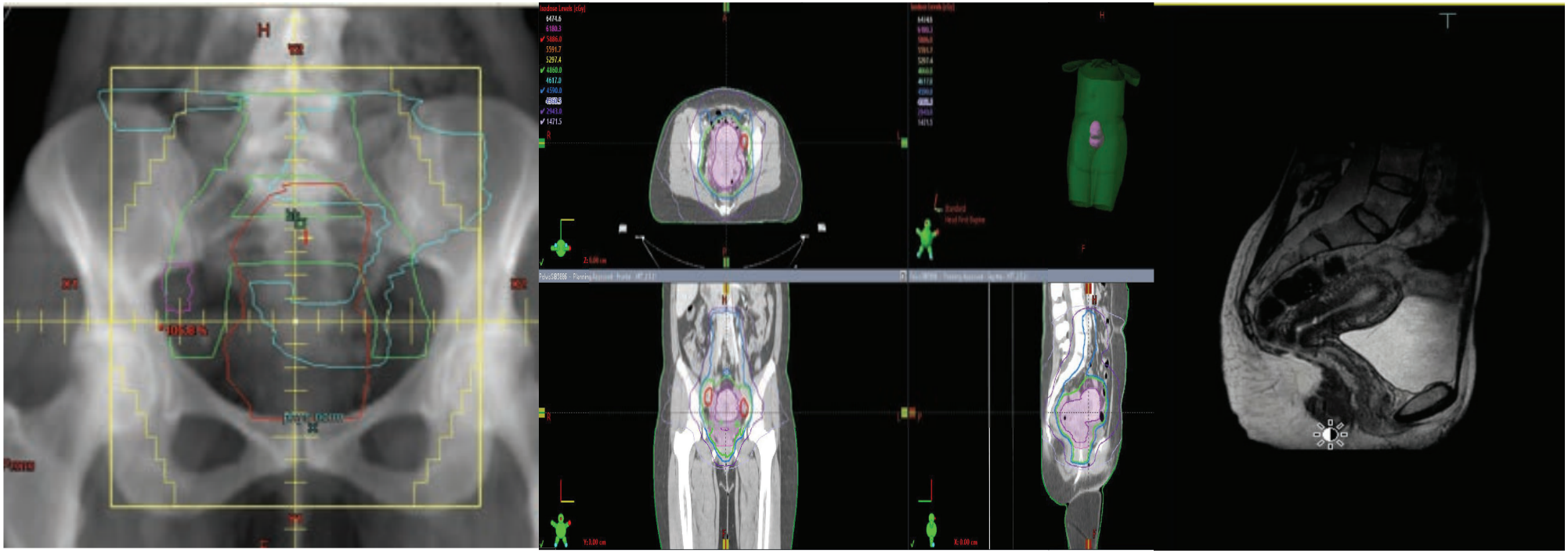
Evolution of Radiation Based on Imaging

2D → 3D→ CT based planning --> MRI Imaging



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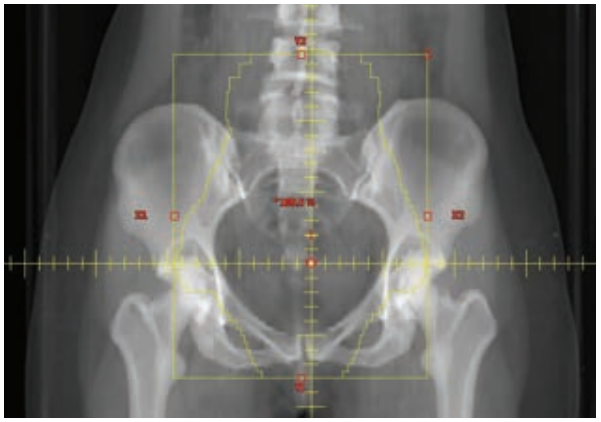
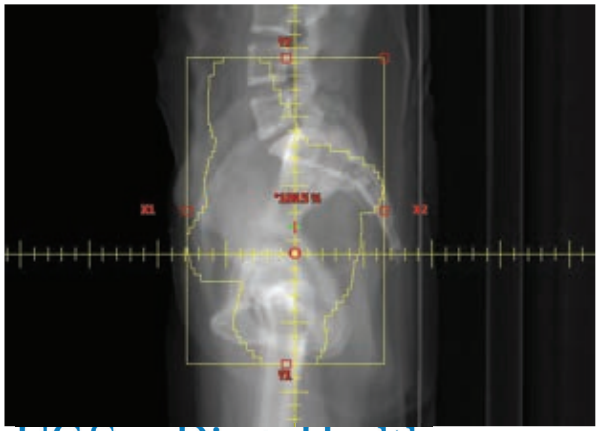
Evolution of External Beam Radiation Therapy





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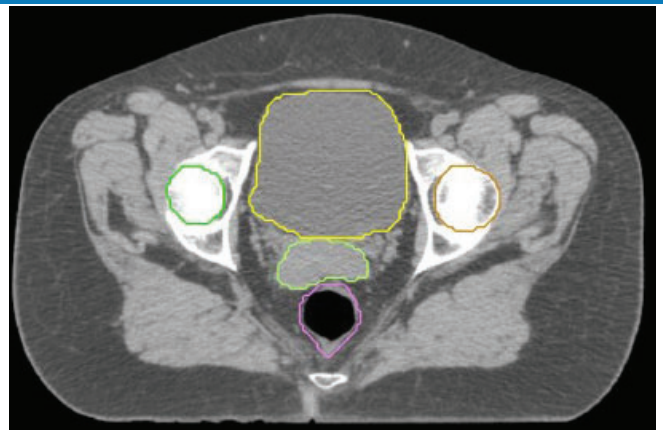
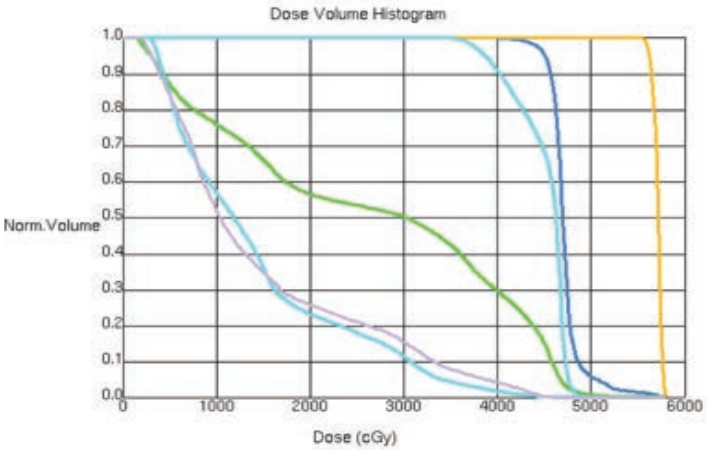
3-D treatment planning using CT scan enables:

1) More accurate delineation of target and normal structures

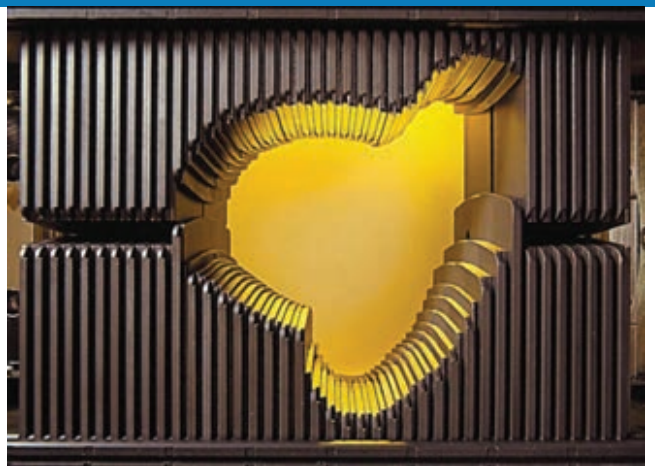
2) Accurate dose calculation to tumor and organs at risk of toxicity so the "quality" of the plan can be evaluated (i.e. probability of cure or toxicity)

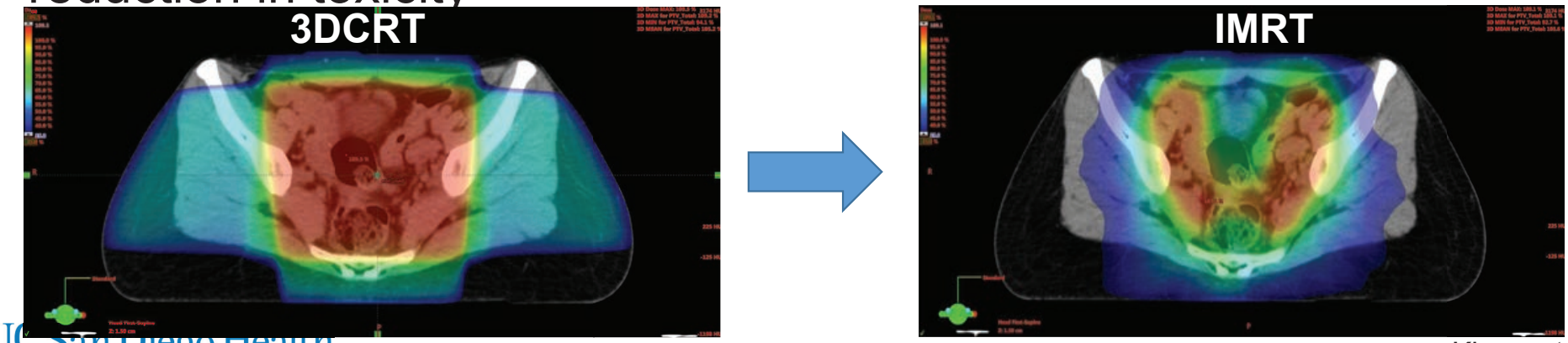




Evolution of External Beam Radiation Therapy

- Use of dynamic MLCs to create irregular (non-uniform) radiation from each field and adjust the intensity around a curved target volume
- Enables dose escalation or reduction in toxicity





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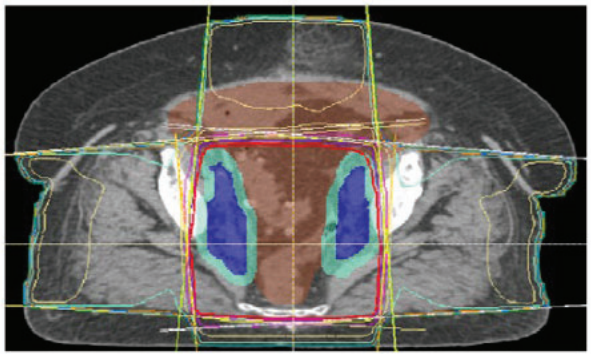
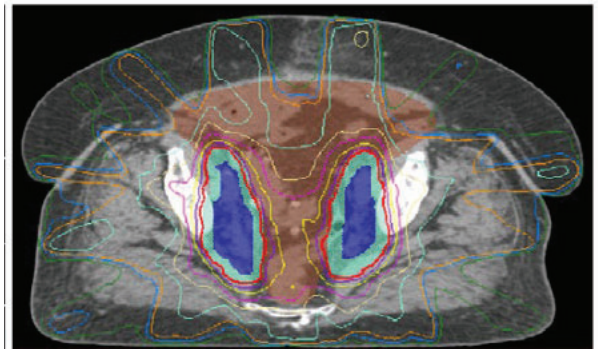
Klopp *et al*, 2018

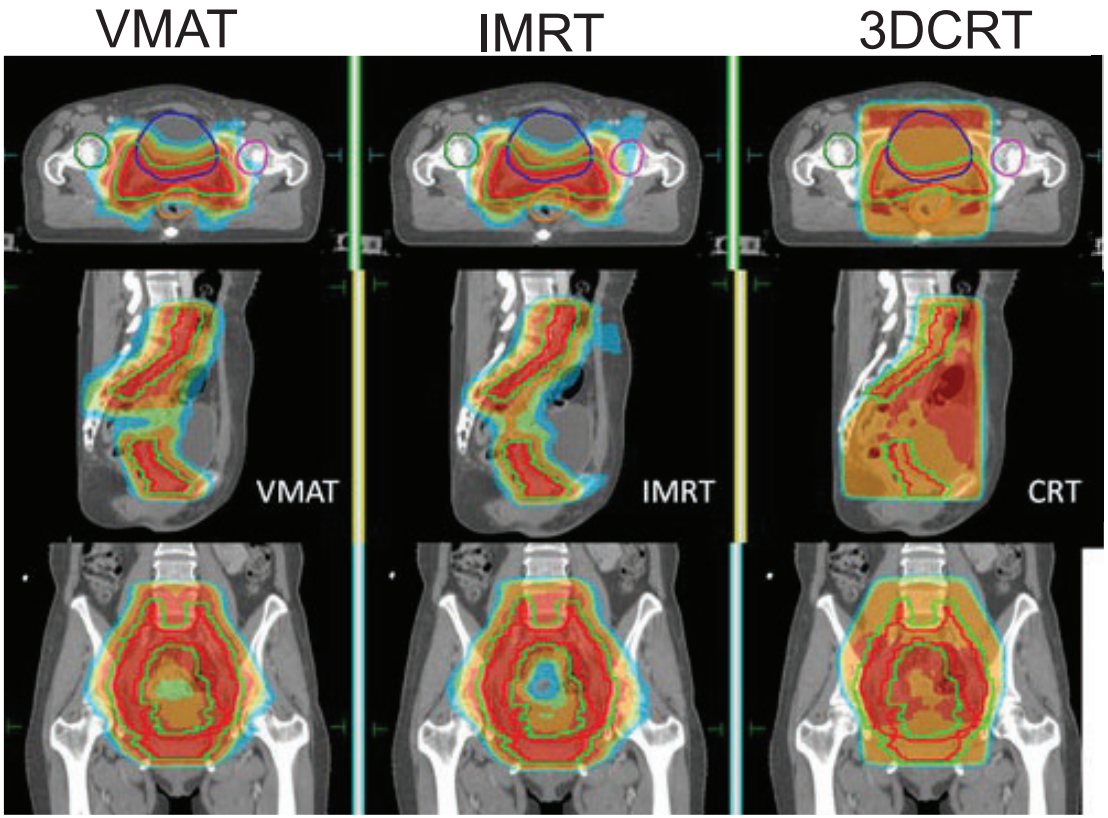
Reducing Radiation Treatment Volumes

- Intensity modulated radiation therapy for cervical cancer
  - Dosimetric studies initially published 2000-2001
  - First clinical series published in 2001
  - By 2009, 18+ retrospective studies published suggesting improved toxicity with IMRT compared to 3DCRT

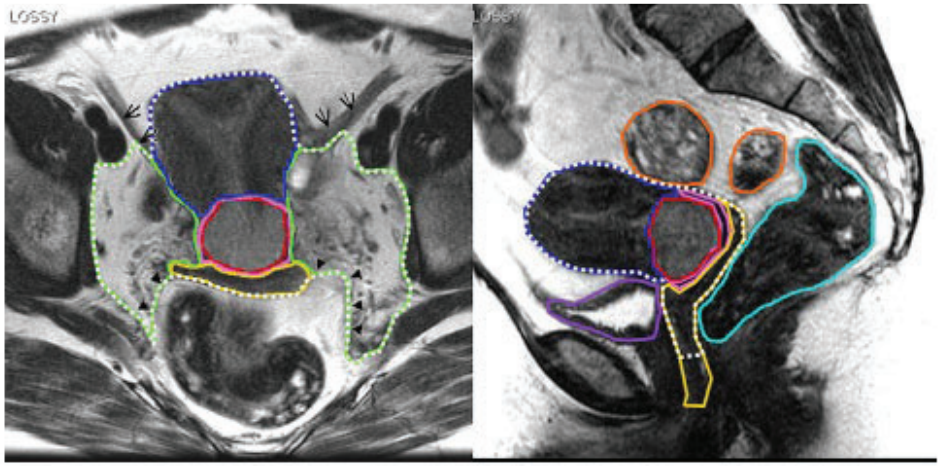




Standard of Care for Cervical Cancer



Deng et al Journal of Applied Clinical Medical Physics 2016



Lim et al 2011 IJROBP

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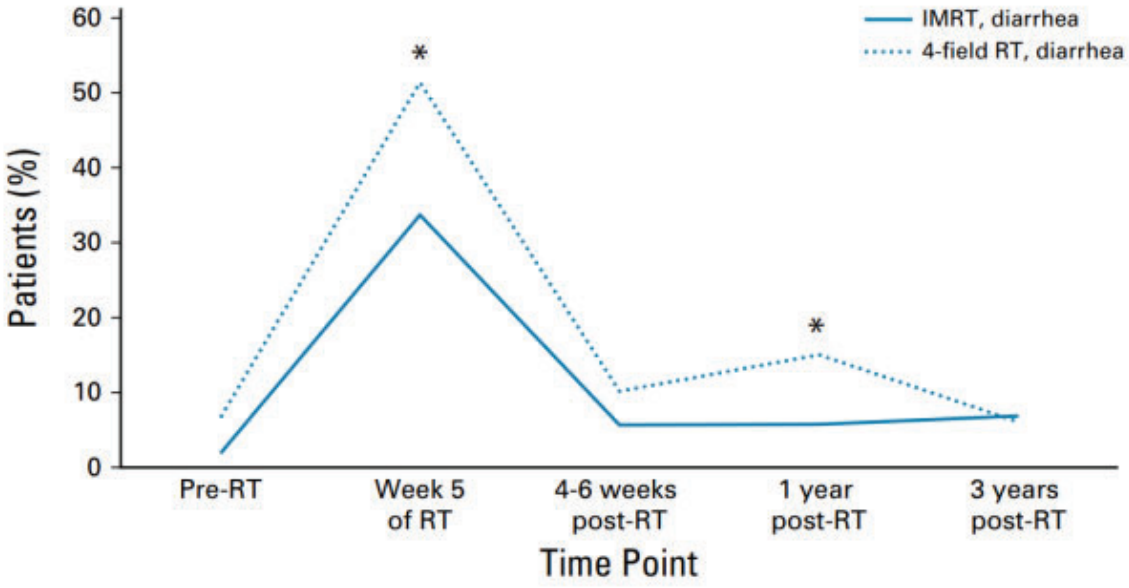
IMRT for Gynecologic Malignancies

- IMRT decreases acute grade II diarrhea and late grade 2 anorexia, abdominal bloating, bowel obstruction
- Benefit greatest among pts receiving concurrent chemotherapy
- Image-guided bone marrow sparing IMRT can decrease acute grade III neutropenia: 19% with vs 54% without BM sparing

Chopra et al. PARCER *IJRO* 2020
Klopp et al. RTOG 1203/TIME-C *JCO* 2018
Williamson et al. INTERTECC *IJROBP* 2022

IMRT for Gynecologic Malignancies



No. at risk:					
IMRT	106	92	88	87	58
4-field RT	120	109	108	93	66

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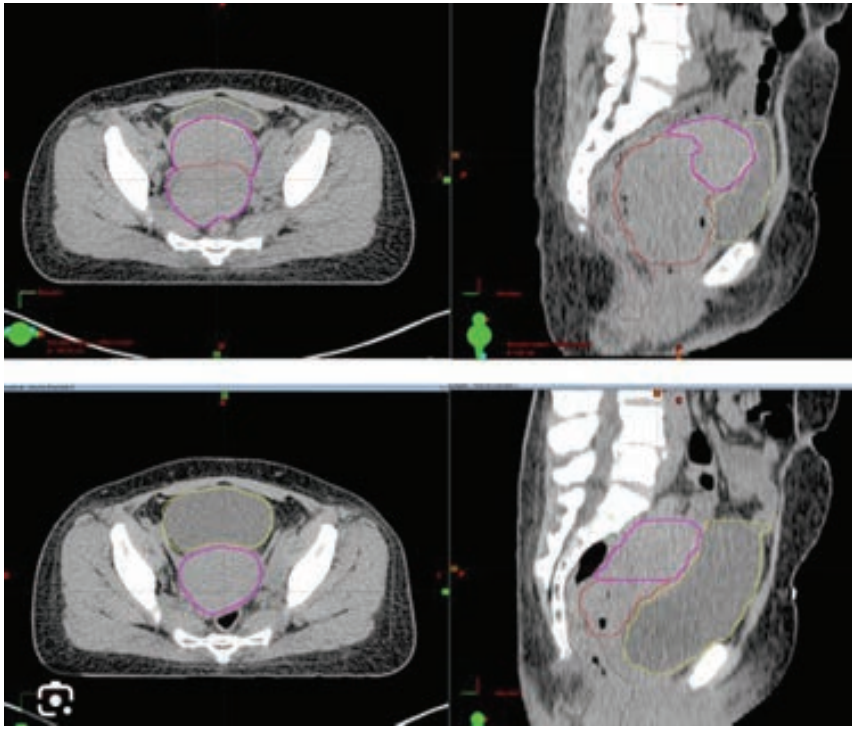
Klopp et al. RTOG 1203/TIME-C *JCO* 2018

Reducing radiation treatment volumes

- Cervical cancer presents unique radiation challenge in that uterus and cervix are highly mobile structures
- Changes in target position may arise due to several reasons
  - Bladder filling
  - Rectal filling
  - Tumor shrinkage



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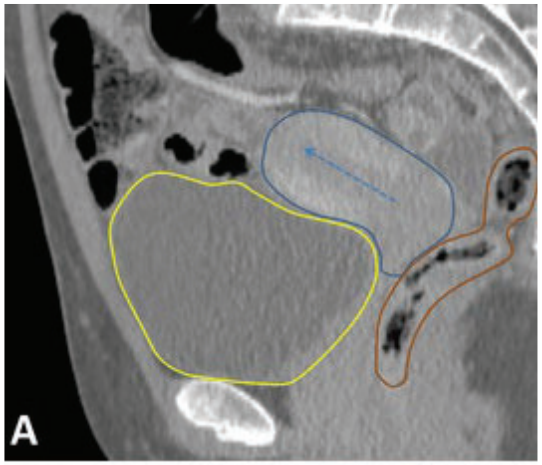
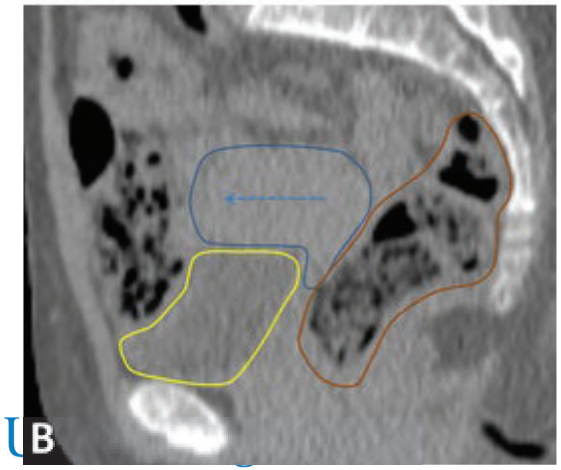
Internal Organ motion during simulation and treatment

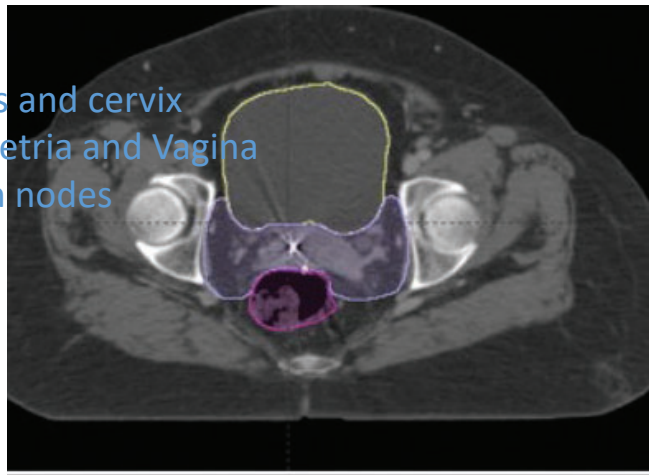


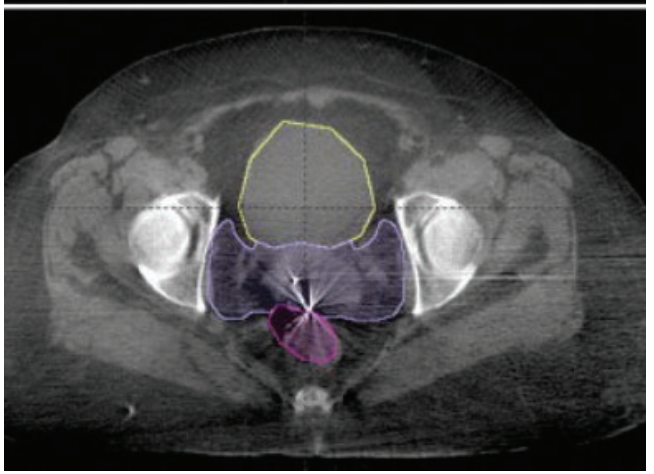


Contour tumor position with empty and full bladder CTs, but treat with full bladder (to push bowel out of the way)

Daily image guidance (e.g. CBCT) to assess for shifts in soft tissue anatomy enables margin reduction around tumor

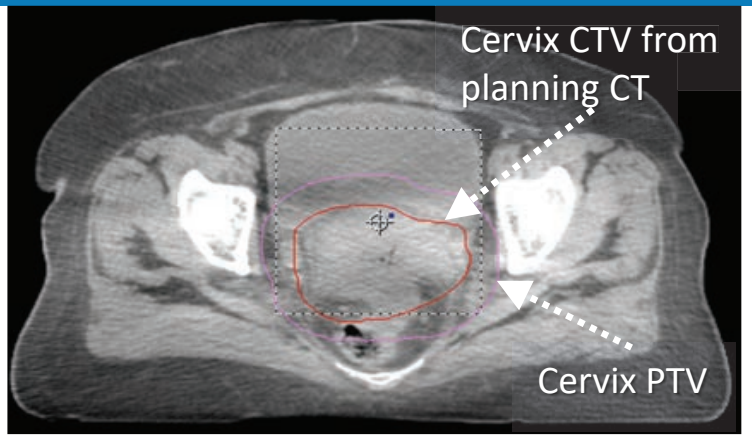
Margins:
1.5cm- uterus and cervix
1.0cm-Parametria and Vagina
0.7cm- lymph nodes

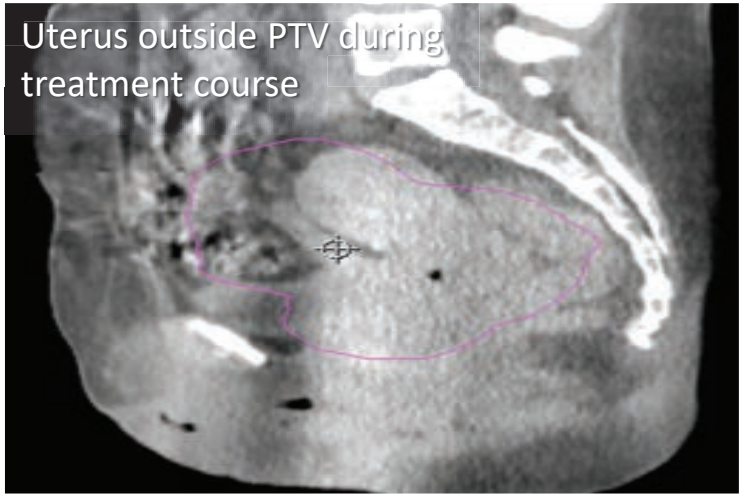




Planning CT is a snapshot of anatomy at beginning of treatment

- Dramatic volume changes of bulky tumors during EBRT
  - Gradual change – infrequent adaptation ok
- Weight changes over treatment course
  - Gradual change – infrequent adaptation ok
- Large variability in day-to-day position of uterus, bladder, rectum (inter-fraction motion)
  - Daily adaptation can significantly reduce CTV-PTV margins and correct for changes from planning CT snapshot
- Changes in bladder filling-/rectal distention during treatment (intrafraction motion)
  - Primary driver of CTV-PTV margins with daily adaptation





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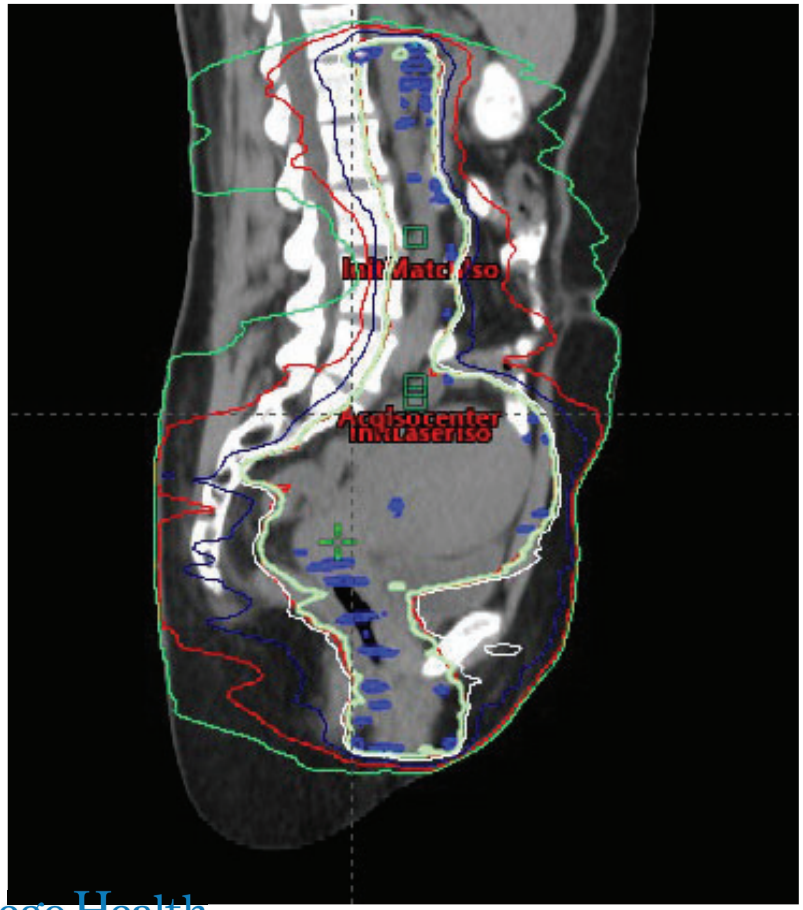
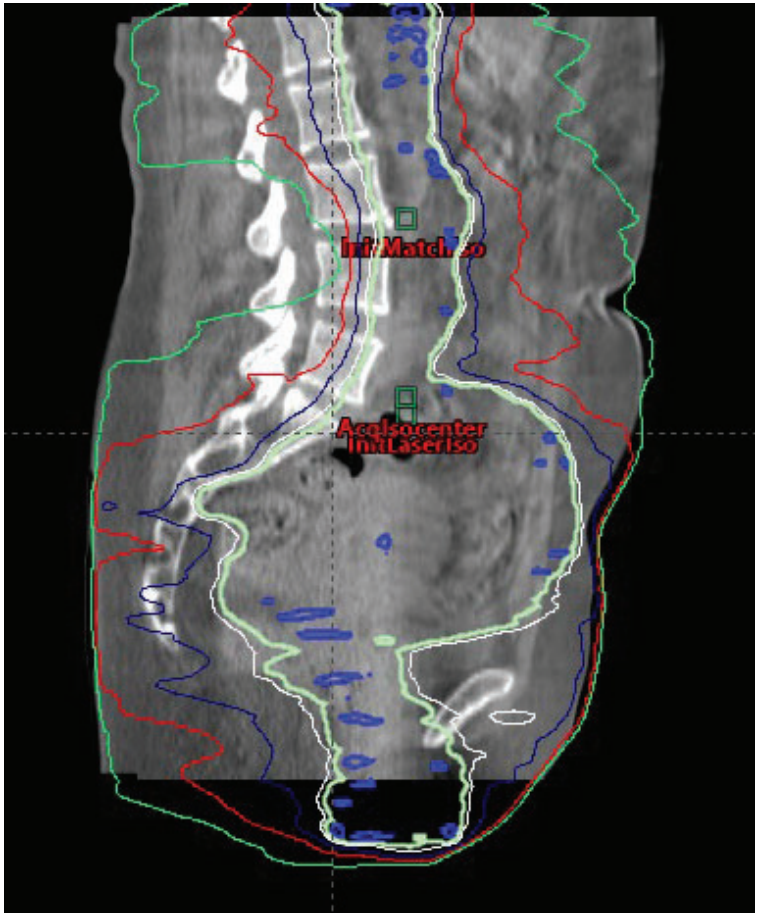
Tumor Shrinkage during treatment





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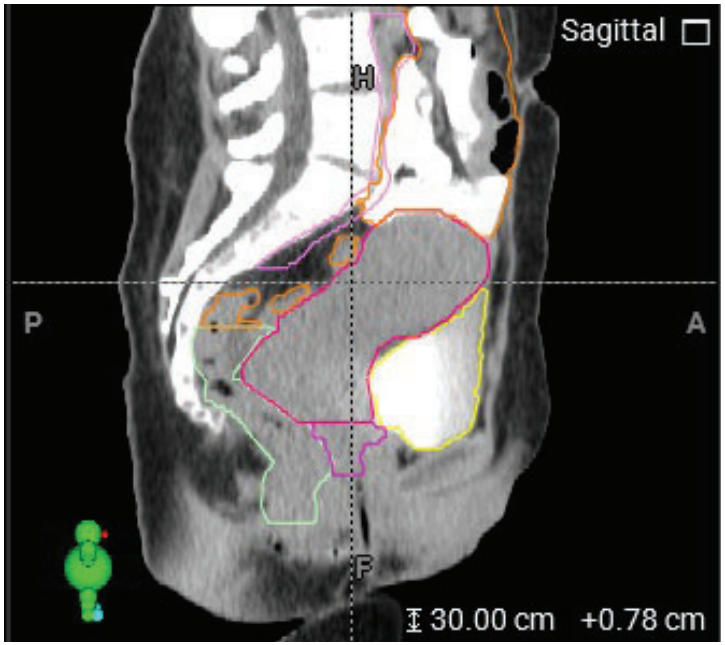
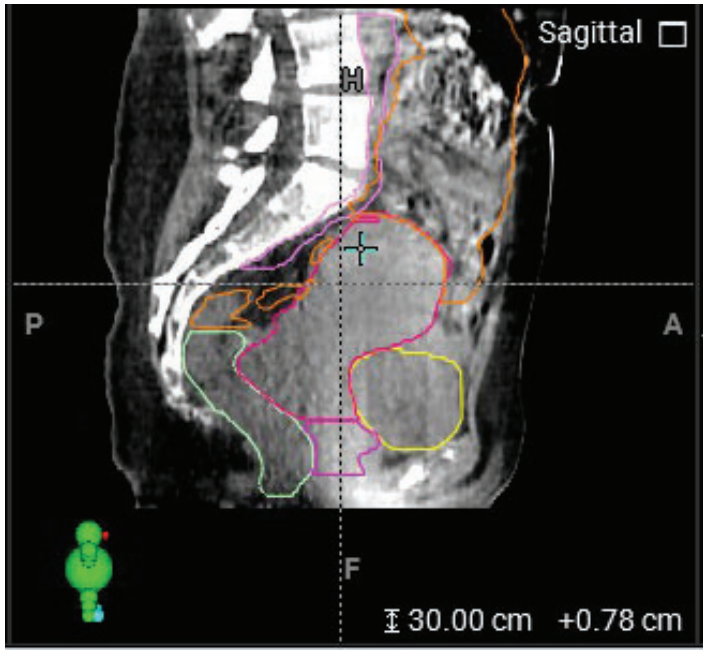
Adaptive Radiotherapy

- Adaptation of Treatment Plan to interfraction organ changes
- Adaptation of Treatment plan to interfraction target changes (if/when applicable)
- Adaptation of Treatment plan to tumor or OAR function changes (if/when applicable)
- Visualized tumor and OARs during beam delivery and adapt Treatment plan to intra-fraction changes
- **Adaptive radiotherapy creates a new treatment plan for each daily fraction based on day of imaging**
- **Allow for tighter treatment margins**

Adaptive Radiotherapy





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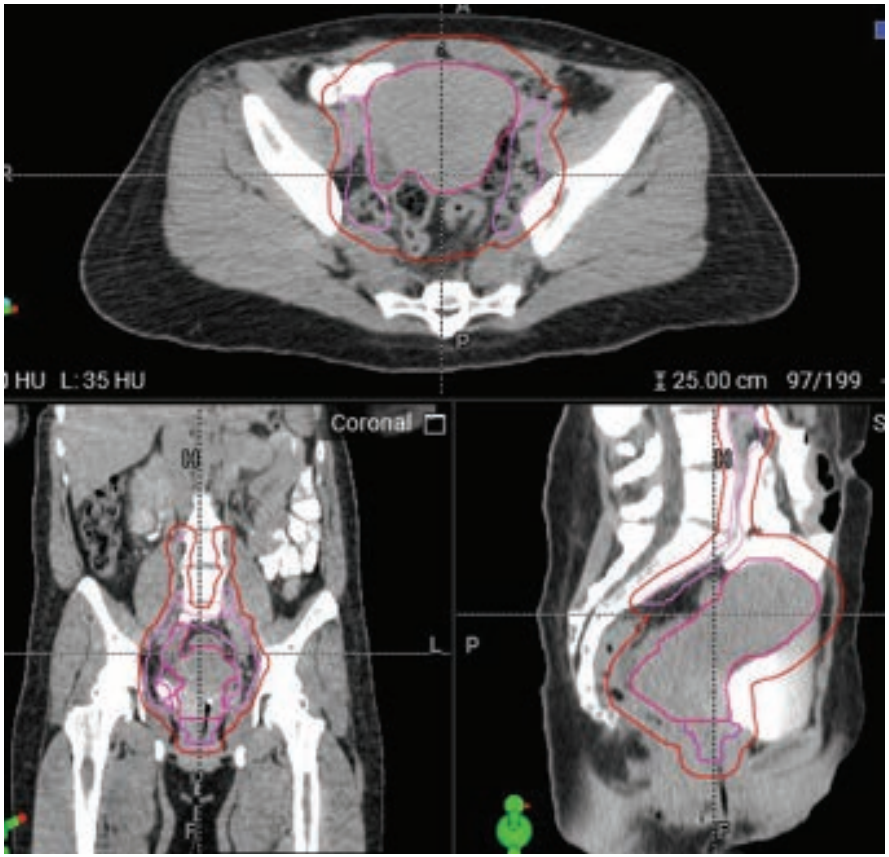
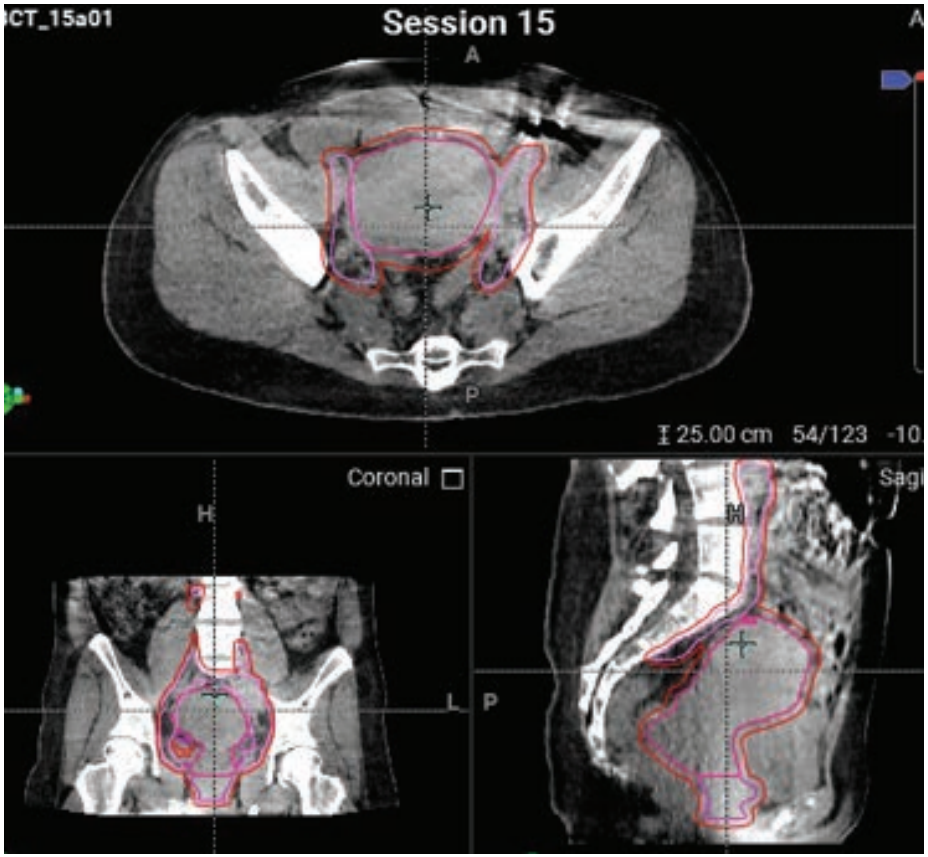
Adaptive Radiotherapy

IMRT Treatment Margins



Adaptive Treatment Margins



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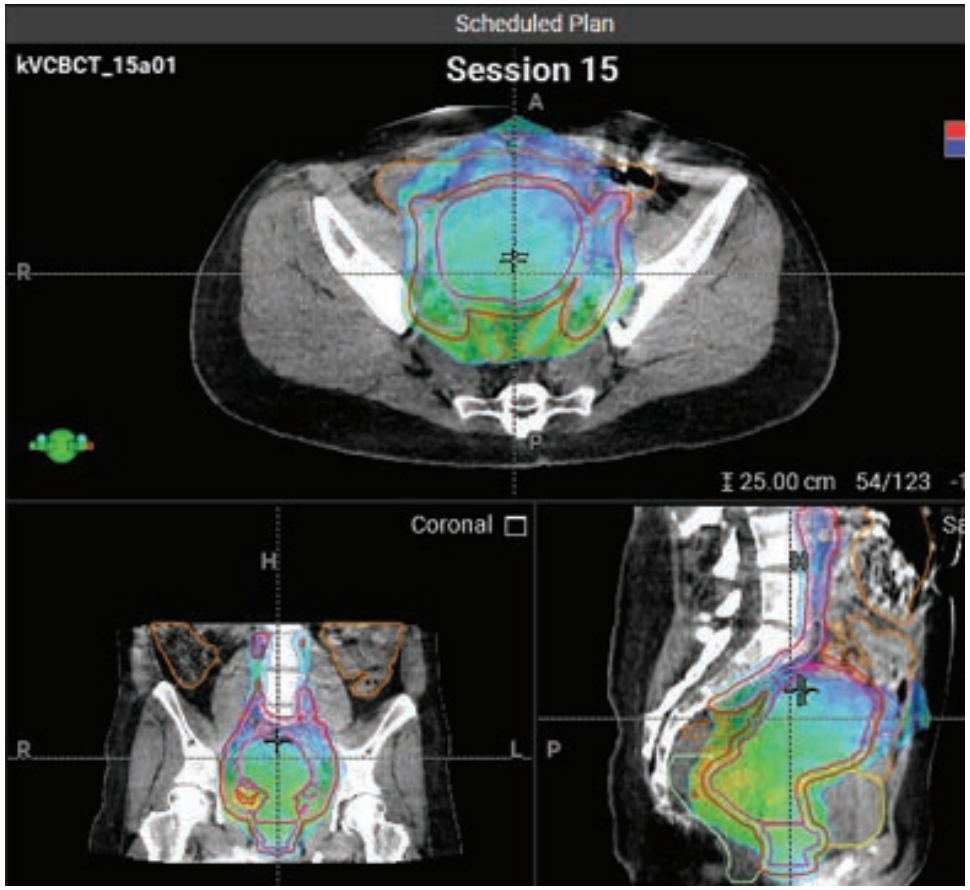
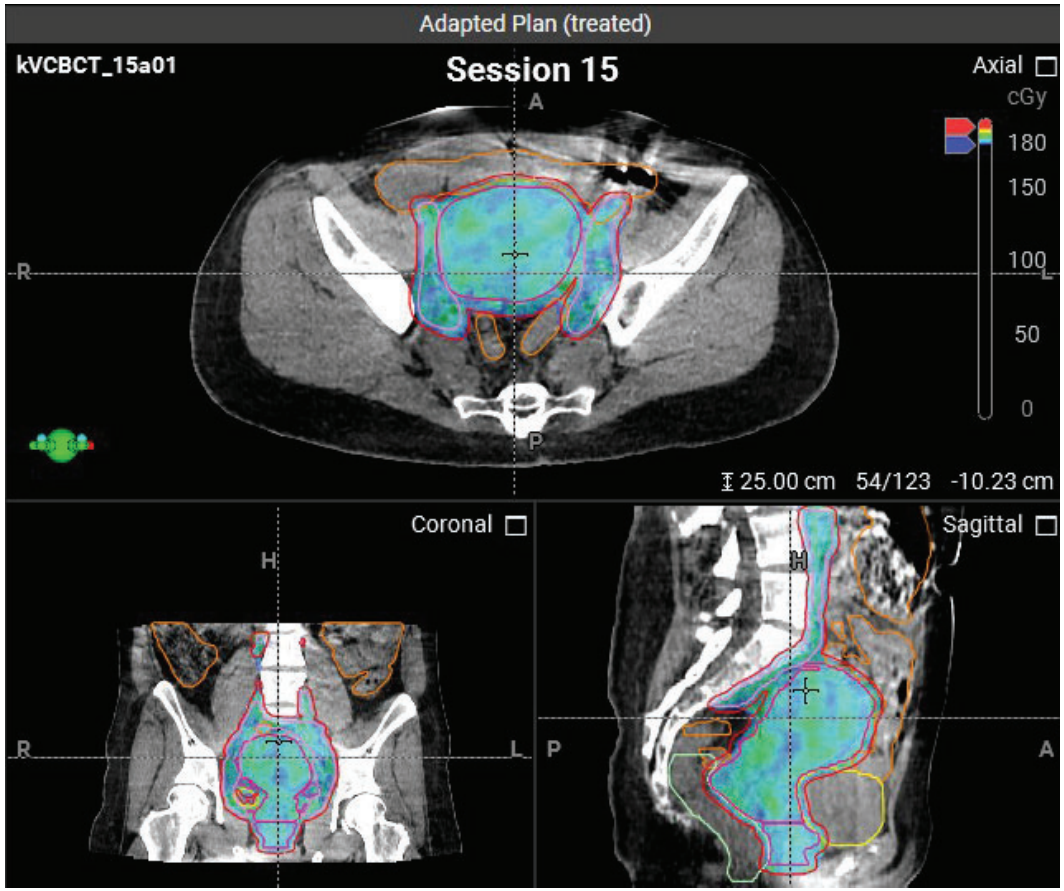
Adaptive Radiotherapy

IMRT Treatment Margins



Adaptive Treatment Margins



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Current Clinical Trial – Adaptive Radiotherapy

Stage IB2-IVA cervical cancer (without pelvic lymph nodes)

Adaptive IMRT Planning
- **Total dose: 4500 cGy / 25 fx**
- Optional parametrial boost (not to exceed 960cGy) will be administered after complete delivery of primary EBRT prescription

Baseline patient reported outcomes (PRO) prior to EBRT

Ethos daily adaptive EBRT (25 fx as prescribed, 5 fx/week)

Standard of care concurrent Cisplatin chemotherapy (weekly)

Week 5 EBRT PRO (~ fx23-25, to be completed prior to BT & PMB)

Optional parametrial boost (PMB) per discretion of treating physician

Standard of care Image guided brachytherapy (BT)

Follow-up PRO (3,12,24 months)

Primary endpoint :Acute Patient Reported Outcome (PRO) GI Toxicity (week 5 of external beam radiotherapy (EBRT)

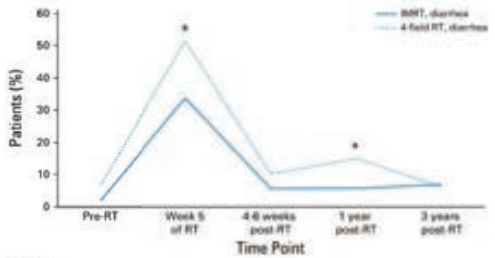

Figure 1. Percentage of patients with high-grade (score ≥ 3) diarrhea frequency as reported by RTOG 1203[23]. Instrument for toxicity assessment was the PRO-CTCAE (identical to that in this protocol).

Definitions

BT: Brachytherapy
EBRT: External beam ra
IMRT: Intensity modul
PMB: Parametrial boost
PRO: Patient reported outcome

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Summary

- Goal of radiation is to treat the tumor and minimize normal tissue toxicity
- Advances in imaging and radiation has allowed improved treatment of cervical cancer while minimizing toxicity
- Adaptive radiotherapy are major advances in treatment of LACC allows us to decrease dose to organs at risk in the pelvis

Thank you

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JESSICA KINGSTON, MD

UC San Diego Health,
Obstetrician/Gynecologist and Professor of Obstetrics, Gynecology, and Reproductive Sciences

Guidelines 101 – Understanding New HPV Testing Recommendations

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MOORES CANCER CENTER
Community Outreach and Engagement

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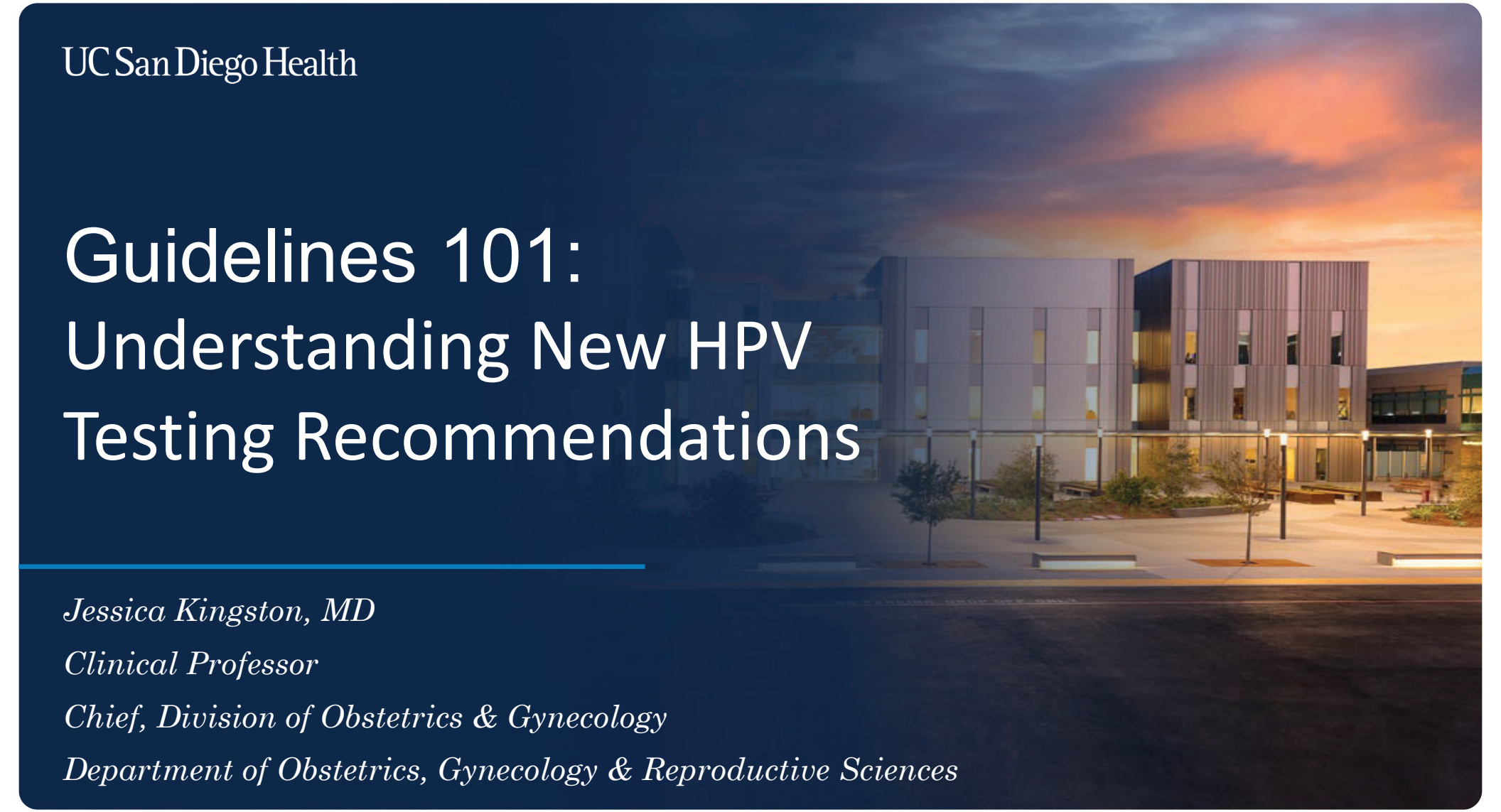
Guidelines 101: Understanding New HPV Testing Recommendations



Jessica Kingston, MD

Clinical Professor

Chief, Division of Obstetrics & Gynecology

Department of Obstetrics, Gynecology & Reproductive Sciences

Screening Strategies

Cytology alone every 3 years

Co-testing every 5 years

Primary HPV testing every 5 years

Age	2020 ACS*	2021 ACOG	2021 USPSTF
21-24	No screening	Cytology Q3	
25-29	Preferred: HPV Q5 Acceptable: Co-test Q5 OR Cytology Q3	Cytology Q3 Can consider HPV Q5	
30-65	Preferred: HPV Q5 Acceptable: Co-test Q5 OR Cytology Q3	Cytology Q3 OR HPV Q5 OR Co-test Q5	
65+	**NO screening** after adequate prior negative screening		
Hysterectomy with cervix removal	**No screening** for those who do NOT have a history of CIN2+, ACIS or cancer in the 25 years leading up to hysterectomy		

USPSTF 2025 – In progress…

Population	Recommendation	Grade
Women ages 21 to 65 years	The USPSTF recommends screening for cervical cancer every 3 years with cervical cytology alone in women ages 21 to 29 years and then every 5 years with clinician- or patient-collected high-risk human papillomavirus (HPV) primary screening in women ages 30 to 65 years. As an alternative to HPV primary screening for women ages 30 to 65 years, the USPSTF recommends continued screening every 3 years with cervical cytology alone or screening every 5 years with high-risk HPV testing in combination with cytology (cotesting).	A
Women younger than age 21 years	The USPSTF recommends against screening for cervical cancer in women younger than age 21 years.	D
Women older than age 65 years	The USPSTF recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer. See the "Practice Considerations" section for discussion of adequate prior screening and risk factors that support screening after age 65 years.	D
Women with a prior hysterectomy and no cervix	The USPSTF recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and do not have a history of a high-grade precancerous lesion (i.e., cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer.	D

USPSTF Updates

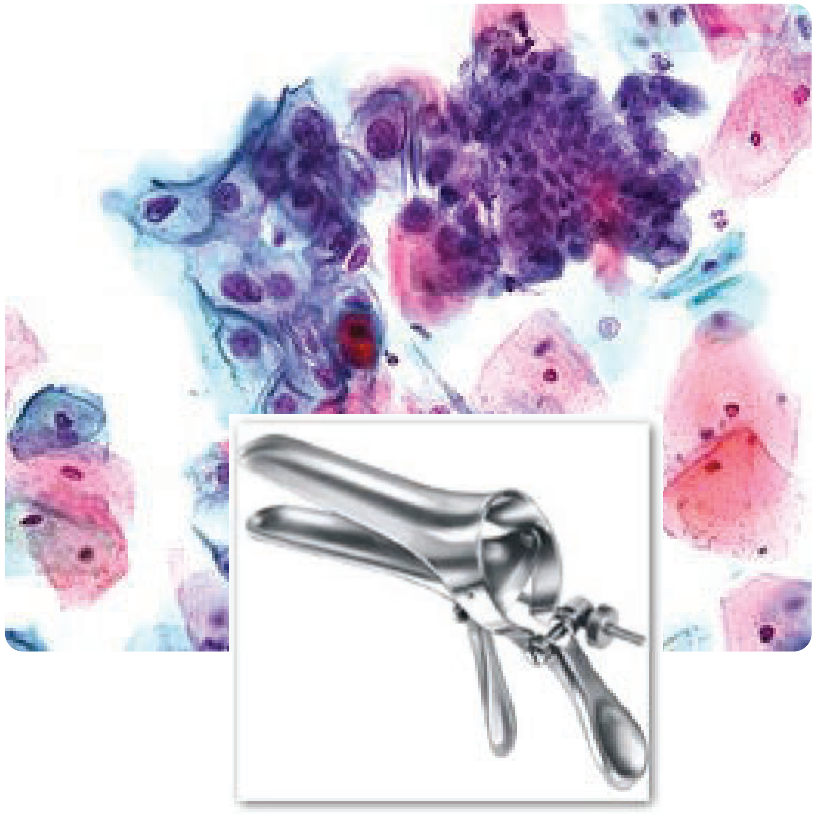
Ages 21-29 – **cytology alone** every 3 years, and THEN…

Ages 30-65 – **primary HPV** every 5 years, either clinician-collected or **patient-collected**

Alternative for ages 30-65 is to continue cytology alone every 3 years OR co-testing every 5 years

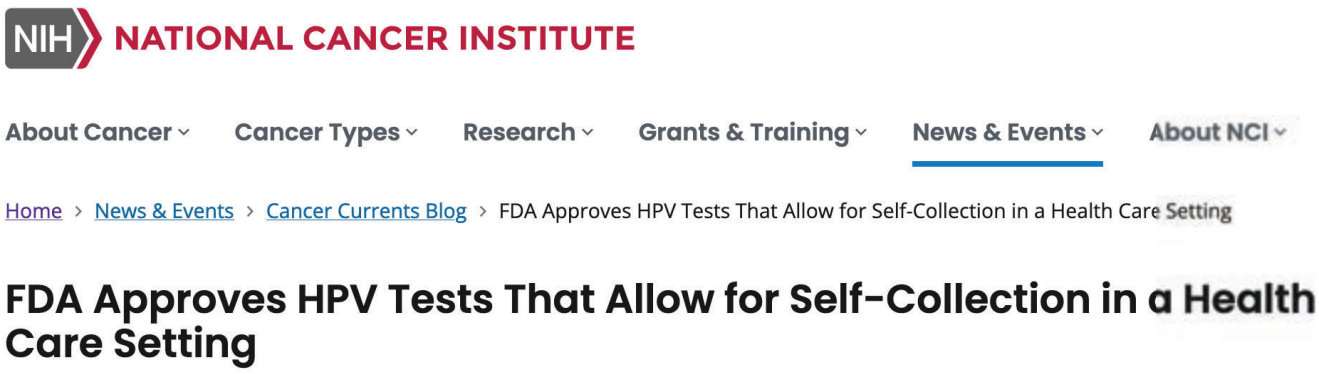
Barriers to Screening

Cervical cancer screening is not always accessible



- Almost 30% of those eligible in the US can't or don't get screened at recommended intervals
- Far fewer people than recommended getting HPV vaccines
- 11,500 cases diagnosed/yr, HALF not screened or inadequately screened
- Patients experiencing poverty, living in rural areas, racial and ethnic minority populations less likely to be screened
- Healthcare deserts – NO regular health care access
- Preferences, religious or cultural beliefs, trauma history, disabilities/medical conditions prevent some from getting a pelvic exam
- Many providers can't do pelvic exams or don't have the infrastructure to do them

Patient-collected HPV testing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Home › News & Events › Cancer Currents Blog › FDA Approves HPV Tests That Allow for Self-Collection in a Health Care Setting

FDA Approves HPV Tests That Allow for Self-Collection in a Health Care Setting

On May 14, 2024, the FDA expanded the approvals of two tests that detect HPV in the cervix.

People can now be offered the option to collect a vaginal sample themselves for HPV testing if they cannot have or don't want a pelvic exam.

Collection involves a swab or brush, and must be done in a health care setting

The tests included in the approvals are Onclarity HPV and Cobas HPV

FDA Approved Self Collection Devices

Copan FLOQSwabs® (552C.RM)
Used for vaginal specimens for use with the cobas® HPV or cobas® HPV tests.

Evalyn® Brush – by Rovers Medical Devices

Worldwide use of HPV self-sampling for cervical cancer screening

B. Serrano, R. Ibáñez, C. Robles, P. Peremiquel-Trillas, S. de Sanjosé, L. Bruni
Preventive Medicine, Volume 154, January 2022, 106900

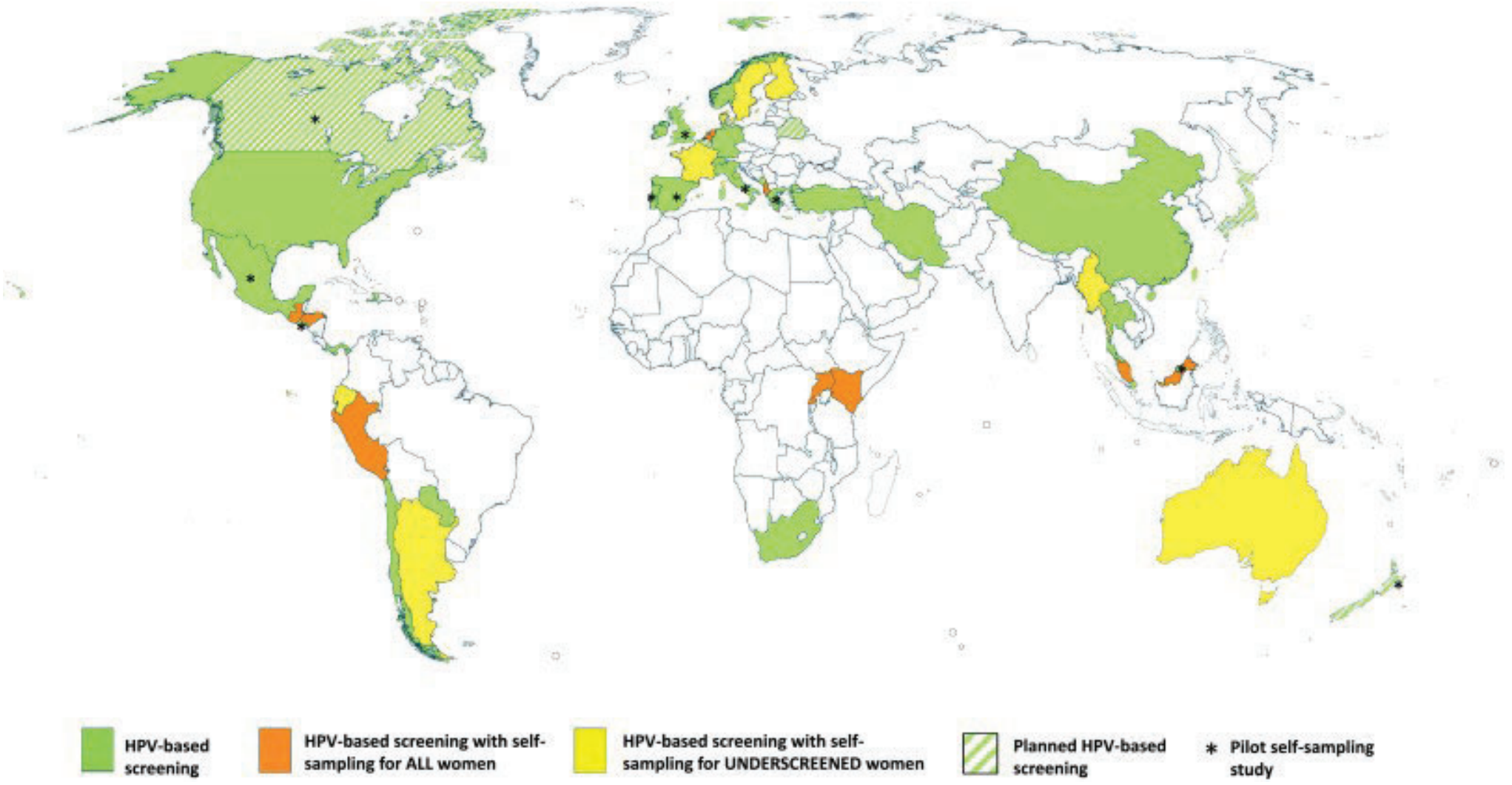
Global use of HPV self-sampling is still limited.

Only 17 (12%) countries with identified screening programs recommend it, 9 as the primary collection method, and 8 to reach under-screened populations.

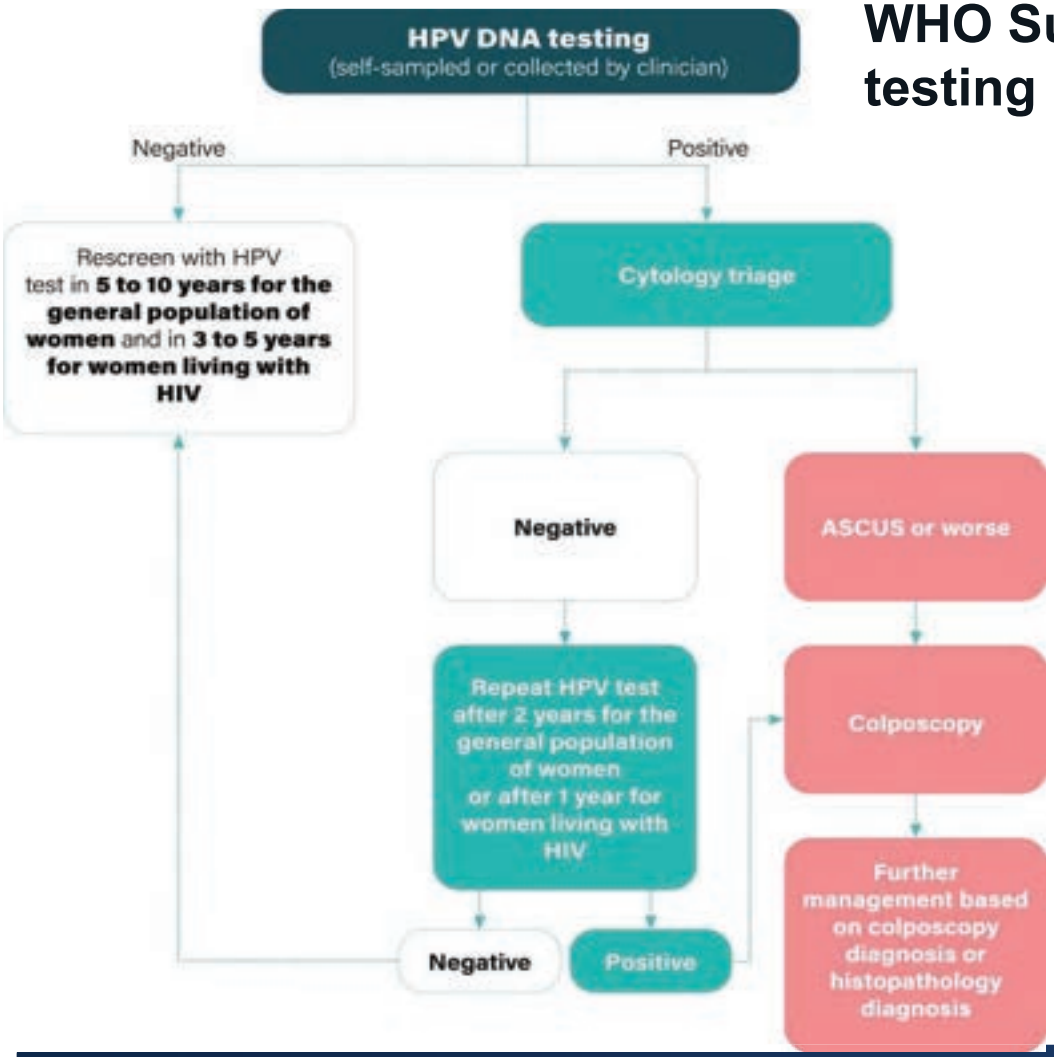
Official recommendations for cervical cancer screening identified in 139 (69%) countries and territories.

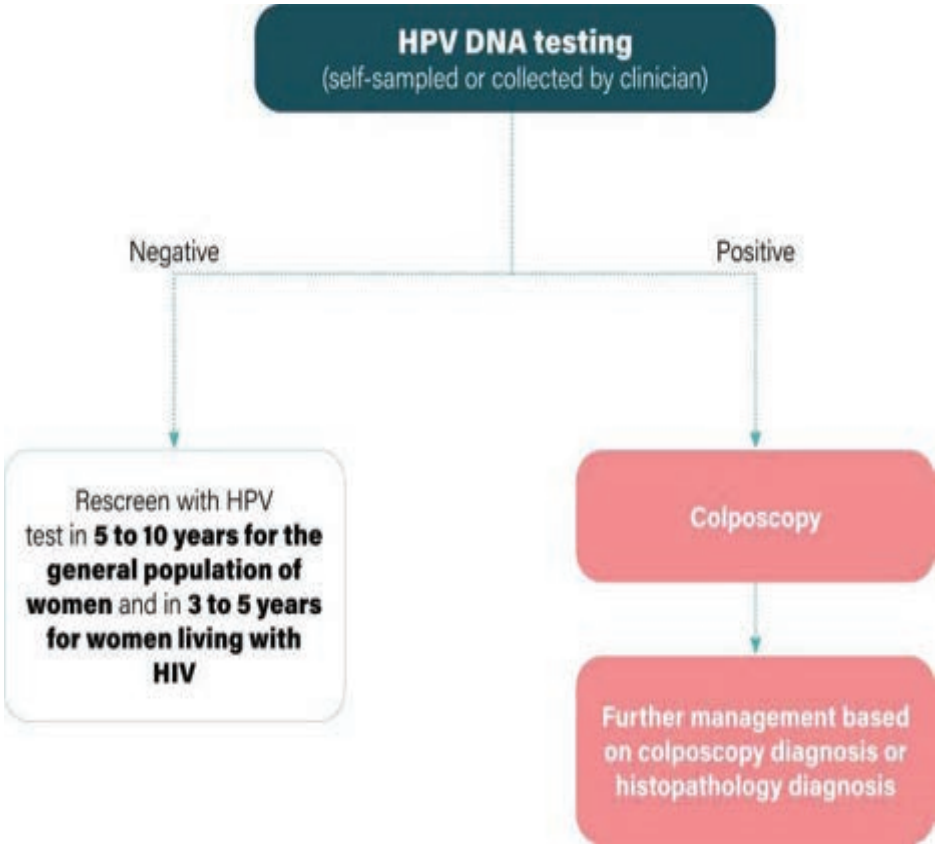
As of February 2021, 48 (24%) countries recommended primary HPV-based screening (primary HPV testing or co-testing)

6 countries (Canada, New Zealand, Belgium, Belarus, Japan and Trinidad & Tobago) reported plans in 2020 for HPV-based screening introduction in the coming 1-2 years. Among the 140, 17% had introduced such screening (three low-, five lower-middle- and 16 upper-middle-income countries), compared to 39% countries among the 62 high-income countries


HPV-based screening
HPV-based screening with self-sampling for ALL women
HPV-based screening with self-sampling for UNDERSCREENED women
Planned HPV-based screening
* Pilot self-sampling study

WHO Suggested algorithms for Primary HPV testing (self or clinician collected)





Checklist for implementing HPV self-collection

- Design workflow for the healthcare setting (office, mobile unit, express care clinic)
- Patient education materials and instructions
- EHR order protocols
- Purchase and use FDA approved HPV self-collection swab or brush
- Lab receiving and processing workflows (reflex cytology for + tests?)
- Result communication and institution of algorithm for follow up and management of positive tests
- Tracking system or management team
- Insurance issues? Reimbursement?

MARLEN HERRERA

Neighborhood Healthcare, Women's Health Program Manager

Cervical Cancer FQHC Case Study

UC San Diego
MOORES CANCER CENTER
Community Outreach and Engagement

neighborhood HEALTHCARE

Women’s Health Cancer Navigation

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WH Cancer Screening

- **Paps and Colposcopy Notification and Tracking**
- **Breast Cancer Screening, Notification, and Tracking**

Policies Key Points:

- **Notification:** Normal results are shared via text or letter; abnormal results are communicated by phone with a management plan per guidelines
- **Follow-Up:** Unreachable patients receive multiple contact attempts, including certified letters and chart alerts.
- **Tracking:** Abnormal results and follow-ups are logged in a tracking tool and reviewed daily.
- **Colposcopy:** Appointments are scheduled, reminders sent, and missed appointments trigger additional outreach.

WH Cancer Navigation Team:

- 2 full time WH LVNs
- Comprehensive surveillance and follow-up
- Blend of automation and direct support, education, and outreach
- Addressing barriers to care compliance (e.g., transportation, language, fear)
- Providing a support system for patients at risk of falling out of care
- Closing gaps in the risk mitigation process.

THANK YOU!

CLOSING REMARKS

and next steps!

CERVICAL CANCER QUALITY IMPROVEMENT LEARNING COLLABORATIVE

- This **collaborative meets quarterly** to discuss action steps and best practices for eliminating the cervical cancer in our San Diego community

EVALUATION

- Your feedback matters. Please take a moment to complete the survey!

CANCER EDUCATION 101

- Be sure to reach out to COE at mcccoe@health.ucsd.edu for any presentation or educational needs!

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THANK YOU!

Summit slides, recording and resources coming soon!

Partnership Inquiries

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