

Advancing NIH Research on the Health of Women: A 2021 Conference

## Clinical Trials in Cervical Cancer – Can they be all we want them to be?

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#HealthOfWomen2021

#### **Disclosures**

- Grants NCI UG1 CA23330, P50 CA 098252
- Contracted Research Agenus, Seattle Genetics, Rubius Therapeutics
- Scientific Advisory Board Seattle Genetics

#### **Cervical Cancer – A Global Problem**

- 604, 127 (3.1%) cases
- 341, 831 (3.4%) deaths





<sup>3</sup> Sung H et al. *CA Cancer J Clin* 2021

#### Four Decades of Cervical Cancer in the US – Why we are here today



<sup>4</sup> SEER.Cancer.gov

#### Access to care – Where are the majority of patients?



Number of New Cancers in the United States, 2018 Cervix, All Ages, All Races and Ethnicities, Female

<sup>5</sup> CDC.gov

#### **NCI Designated Comprehensive Centers / NCCN Sites**





<sup>6</sup> Cancer.gov, NCCN.org

#### **Locally Advanced Cervical Cancer**

- Whole pelvic radiation and brachytherapy was the standard of care
- Then 1999 came along....
- FIVE Practice changing publications referenced by the FDA GOG 85 (SWOG 8695), GOG 109 (SWOG/RTOG), GOG 120, GOG 123, and RTOG 90-01

#### NCI Urges Chemo-RT Combination for Invasive Cervical Cancer

March 31, 1999

Oncology NEWS International, Oncology NEWS International Vol 8 No 4, Volume 8, Issue 4



BETHESDA, Md-The National Cancer Institute (NCI) has recommended that oncologists use a combination of chemotherapy and radiation instead of radiation alone to treat invasive cervical cancer.

#### Again, how often does this happen?

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#### **NCCN Cervical Cancer Guidelines – NCI Investment**

Clinical Stage (CERV-1) Stage IA1 (no LVSI), Stage IA1 (with LVSI) and Stage IA2, Stage IB1 and Select IB2 (Fertility Sparing) (CERV-2) GOG 278\* Stage IA1 (no LVSI), Stage IA1 (with LVSI) and Stage IA2 (Non-Fertility Sparing) (CERV-3) Stage IB1, IB2 and Stage IIA1 (Non-Fertility Sparing) (CERV-4) GOG 92, 109 → 263\*, 274\* Stage IB3 and Stage IIA2 (Non-Fertility Sparing) (CERV-4) GOG 85, 120, 123, 165, 191, Stage IB3, Stage IIA2, and Stages IIB, III, and IVA (CERV-6) 219, 9929, GY006\*, GY017\* Incidental Finding of Invasive Cancer After Simple Hysterectomy (CERV-9) Surveillance (CERV-10) Local/Regional Recurrence (CERV-11) Stage IVB or Distant Metastases (CERV-12) GOG 43, 110, 149, 169, 179, 204, 240, 265 Principles of Pathology (CERV-A) GOG 49 Principles of Imaging (CERV-B) GOG 233 Principles of Evaluation and Surgical Staging (CERV-C) Principles of Radiation Therapy (CERV-D) Sedlis Criteria for External Pelvic Radiation After Radical Hysterectomy In Node-Negative, Margin-Negative, Parametria-Negative Cases (CERV-E) Systemic Therapy Regimens for Cervical Cancer (CERV-F)

Staging (ST-1)

\*Ongoing

<sup>9</sup> Abu-Rustum NR et al. J Natl Compr Canc Netw 2020

#### **Receipt of Guideline Adherent Care – 2021**

- 52.7% of ALL patients received standard of care treatment for LACC (SEER 2007-2015)
   Older age, public insurance, and Black race were associated with decreased rates of brachytherapy
- When comparing Black and White patients 5-year OS was 44.2% vs. 50.9% (p < 0.0001)
- In patients whose received brachytherapy there was no survival difference





#### **Observations on Cervical Cancer** in Alabama

#### **Cervical Cancer in Alabama**

Incidence Rates<sup>†</sup> for Alabama by County Cervix, 2014 - 2018 All Races (includes Hispanic), Female, All Ages





Quantile Interval



Highest incidence counties
1. Dekalb 13.1 (NE)
2. Dale 15.1 (SE)
3. Etowah 15.6 (NE)
4. Walker 15.6 (UCen)
5. Dallas 18.6 (LCen)

#### **Does distance from a CCC Matter?**



Fig. 1. Geographic distribution heat map of patient residences.

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Fig. 1. Geographic distribution heat map of patient residences.

### Advanced Stage Cervical Cancer - Race, Geography and Socioeconomic Factors

- Retrospective cohort from 2005-2015
- Variables

Race/Ethnicity

Geography – Rural, Urban, Black Belt

Distance to ACOG provider

Insurance

	Crude OR	95% CI
Age > 65 y vs. ≤50 y	1.95 <sup>b</sup>	1.34-2.84
Black vs. white	$1.46^{c}$	1.09-1.94
Rural vs. urban	1.19	0.91-1.56
Shorter distance to provider	0.99	0.98-1.01
Uninsured <sup>a</sup>	1.40	0.93-2.10
Public insurance <sup><i>a</i></sup>	$1.80^{b}$	1.35-2.4
Higher income	0.93	0.85-1.03



<sup>15</sup> Powell TC et al. J Low Geni Tract Dis 2018

# FDA grants accelerated approval to tisotumab vedotin-tftv for recurrent or metastatic cervical cancer

Efficacy and safety of tisotumab vedotin in previously treated  $\Rightarrow$  is recurrent or metastatic cervical cancer (innovaTV 204/ GOG-3023/ENGOT-cx6): a multicentre, open-label, single-arm, phase 2 study

Robert L Coleman, Domenica Lorusso, Christine Gennigens, Antonio González-Martín, Leslie Randall, David Cibula, Bente Lund, Linn Woelber, Sandro Pignata, Frederic Forget, Andrés Redondo, Signe Diness Vindeløv, Menghui Chen, Jeffrey R Harris, Margaret Smith, Leonardo Viana Nicacio, Melinda S L Teng, Annouschka Laenen, Reshma Rangwala, Luis Manso, Mansoor Mirza, Bradley J Monk, Ignace Vergote, on behalf of the innovaTV 204/GOG-3023/ENGOT-cx6 Collaborators\*

Coleman RL et al. Lancet Oncol 2021

## FDA approves pembrolizumab combination for the first-line treatment of cervical cancer



ORIGINAL ARTICLE

#### Pembrolizumab for Persistent, Recurrent, or Metastatic Cervical Cancer

N. Colombo, C. Dubot, D. Lorusso, M.V. Caceres, K. Hasegawa, R. Shapira-Frommer, K.S. Tewari, P. Salman, E. Hoyos Usta, E. Yañez, M. Gümüş, M. Olivera Hurtado de Mendoza, V. Samouëlian, V. Castonguay, A. Arkhipov, S. Toker, K. Li, S.M. Keefe, and B.J. Monk, for the KEYNOTE-826 Investigators\*

<sup>17</sup> Colombo N et al. *NEJM* 2021

#### Conclusions

- NCI sponsored research has had a substantial impact on women with cervical cancer
- Novel approaches may be needed in different geographical regions
- More recent paradigm shifting trials have been performed outside of the NCI
- While therapeutic advances remain important, novel approaches to improve primary vaccination and screening should not be forgotten

#### **Improving cervical cancer clinical trials**

- Need representative populations enrolled
  - Re-evaluate minimum of different racial & ethnic groups?
- Pursue additional research support for enrollment of underrepresented minorities
  - Bonus credit similar to LAPS versus non–LAPS sites

sites.

• "Real world" designs?





#### Thank you!



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