THE FUTURE OF CLINICAL RESEARCH IN CERVICAL CANCER TREATMENT

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NOTHING TO DISCLOSE

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THE VIEWS EXPRESSED ARE MY OWN AS A FORMER K12-TRAINED SCHOLAR AND NOT THOSE OF THE UNIVERSITY OF KENTUCKY OR THE US FEDERAL GOVERNMENT. LINKS OR DISCUSSION OF SPECIFIC DRUG PRODUCTS DO NOT CONSTITUTE ENDORSEMENT.
UTERINE CERVIX CANCER TREATMENT AS A NATIONAL PRIORITY

(1) ADVANCED-STAGE UTERINE CERVIX CANCER SURVIVAL RATE HAS NOT Risen IN TWO DECADES
(2) RADIOTHERAPY UTILIZATION DRIVES SURVIVAL FOR ADVANCED-STAGE DISEASE
(3) INTENSIFYING REGIONAL TREATMENT IMPROVES SURVIVAL
(4) IDENTIFYING WOMEN AT-RISK FOR DISTANT DISEASE RELAPSE IMPACTS SURVIVAL OUTCOME
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SURVIVORSHIP

NATIONAL CANCER INSTITUTE
Surveillance, Epidemiology, and End Results Program
New cases come from SEER 13. Deaths come from U.S. Mortality. All Races, Females. Rates are Age-Adjusted.
SURVIVORSHIP: CERVIX UTERI STAGE AND 5-YEAR RELATIVE SURVIVAL

Percent of Cases by Stage

- Localized (44%)
  Confined to Primary Site
- Regional (36%)
  Spread to Regional Lymph Nodes
- Distant (16%)
  Cancer Has Metastasized
- Unknown (4%)
  Unstaged

5-Year Relative Survival

- Localized: 91.9%
- Regional: 58.2%
- Distant: 17.8%
- Unknown: 52.4%
SURVIVORSHIP: CERVIX UTERI INCIDENCE /
PER 100,000 BY STATE
SUM OF PROJECT DOLLARS PER STATE
CERVIX UTERI 2021

SURVIVORSHIP: RESEARCH DOLLARS – CERVIX UTERI
SUM OF PROJECT DOLLARS PER STATE
Age-Adjusted Cancer Mortality Rates in Kentucky, Cervix Uteri 1999-2018
By County Age-Adjusted to the 2000 US Standard Million Population
Kentucky Rate 2.8 / per 100,000

Survivorship: Highest Mortality - Cervix Uteri
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TREATMENTS

DAILY TELETHERAPY - CERVIX UTERI
TWICE WEEKLY BRACHYTHERAPY - CERVIX UTERI
WEEKLY CISPLATIN CHEMOTHERAPY - CERVIX UTERI
[1999 NATIONAL INSTITUTES OF HEALTH CLINICAL ALERT]
4 MONTHLY INFUSION TREATMENTS

MONTHLY RADIOPHARMACEUTICAL THERAPY – HIGH AT-RISK CERVIX UTERI
[UNDER FUTURE CLINICAL INVESTIGATION AS POST-RADIOThERAPy TREATMENT]
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ANTIBODY-DRUG CONJUGATE THERAPY – METASTATIC CERVIX UTERI
PROGNOSTIC ENRICHMENT
SELECTED FOR HIGH RISK OF POOR OUTCOME

RADIOPHARMACEUTICAL THERAPY – NODE-POSITIVE CERVIX UTERI
STARTING DOSE
30 mg/day

30 mg/day for 1 week

After ≈1 week, titrate to 50 mg/day

PERSONALIZED DOSE INTENSIFICATION – CERVIX UTERI

MAXIMUM DOSE
70 mg/day

TARGET DOSE RANGE

Adjust based on clinical response until appropriate target dose is achieved

50 mg/day

50 mg/day
PERSONALIZED SCHEDULE INTENSIFICATION – CERVIX UTERI
UTERINE CERVIX CANCER TREATMENT AS A NATIONAL PRIORITY

1. Advanced-stage uterine cervix cancer survival rate has not risen in two decades
2. Radiotherapy utilization drives survival for advanced-stage disease
3. Intensifying regional treatment improves survival
4. Identifying women at-risk for distant disease relapse impacts survival outcome
SHED PERIPHERAL BLOOD DEOXYRIBONUCLEOTIDES – CERVIX UTERI
SHED PERIPHERAL BLOOD CANCER CELL OR HUMAN PAPILLOMAVIRUS DNA – CERVIX UTERI
SHED PERIPHERAL BLOOD CIRCULATING TUMOR CELLS – CERVIX UTERI
PRETHERAPY $^{18}$F-FLUORODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY – CERVIX UTERI
Uterine Cervix Cancer Treatment As a National Priority

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4. Identifying women **at-risk for distant disease relapse** impacts survival outcome.