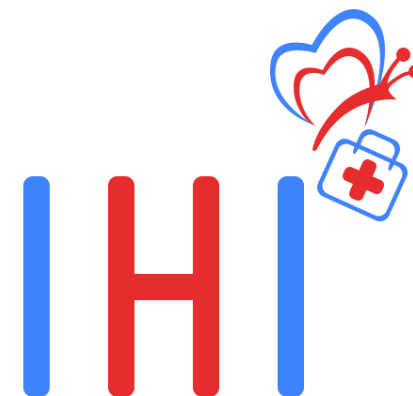
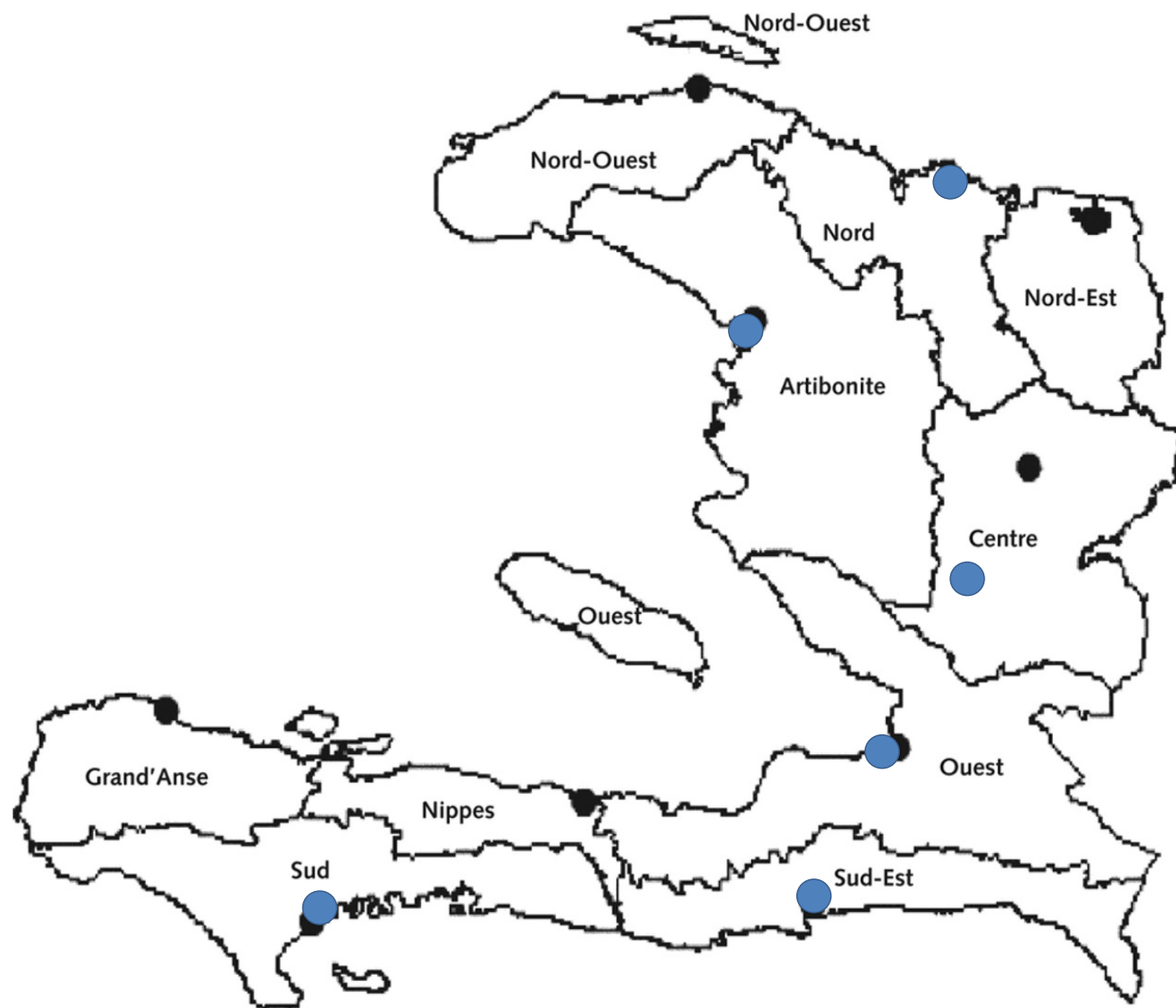




# Vertically-Integrated Cervical Cancer Care in Haiti

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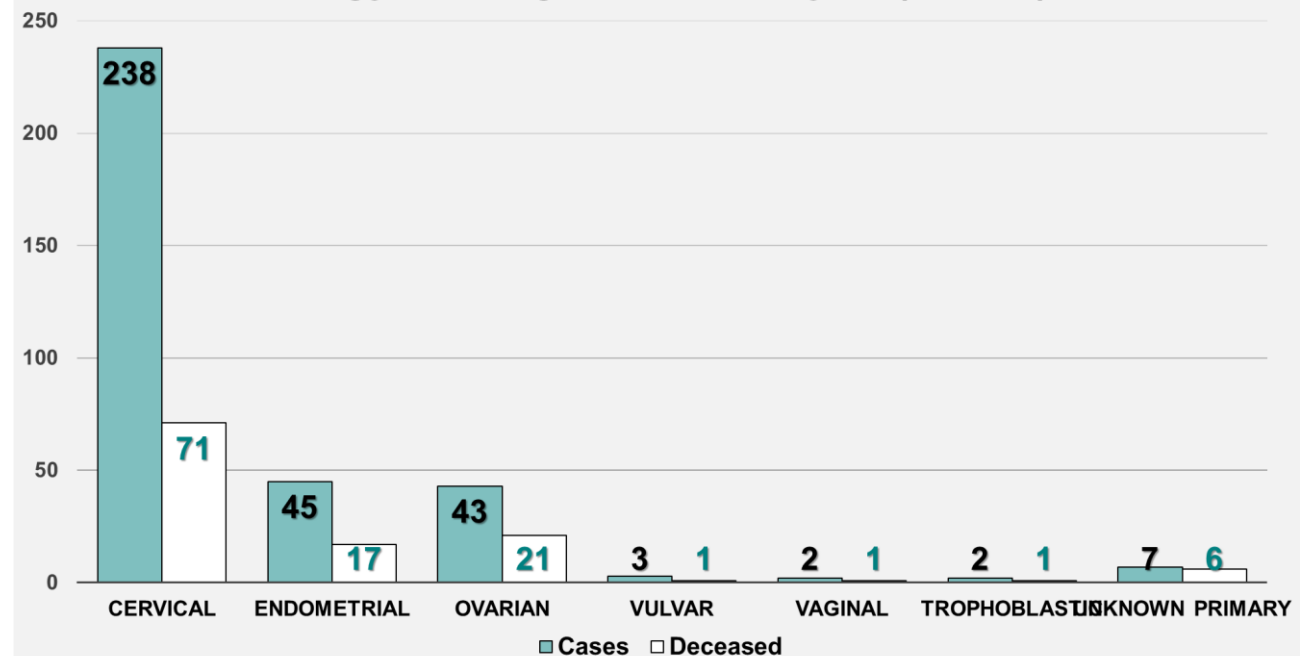
# Statistics

# Gynecologic Cancers through 2018

**Table 1: Characteristics of the study population (N=340)**

Variables	Frequency (n)	Proportion (%)
<b>Age groups (years)</b>	15 - 39 (45)	13.2%
	40 - 64 (216)	63.6%
	65 - 89 (79)	23.2%
<b>Gyn. cancer types</b>	Cervical (238)	70.0%
	Endometrial (45)	13.2%
	Ovarian (43)	12.6%
	Vulvar (3)	0.9%
	Vaginal (2)	0.6%
	Trophoblastic (2)	0.6%
	Unknown primary (7)	2.1%
<b>Cancer stage (n=285)</b>	0 (8)	2.8%
	I (30)	10.5%
	II (59)	20.7%
	III (67)	23.5%
	IV (121)	42.5%
<b>Outcome</b>	Deceased (118)	34.7%
	Alive/in treatment (196)	57.7%
	Lost to follow-up (26)	7.6 %

**Figure 2: Number of incident and deceased cases per gynecological cancer type (N=340)**



# Under 30

- 20% (n=461) were adolescents and young adults. 82% of these patients were female
- Breast cancer was the most common type (n=222, 48%%)
- Followed by cervical cancer representing 10% of the cases (n=43)

# HIV/AIDS

- 1007 (44%) had a known HIV status.
- Eighty-three of them (8%) were HIV-positive, among them 63 women and 20 men.
- 32% of those with HIV had invasive cervical cancer (n=27)



Screening

# Proof of Concept for Community-Based Screening

- Educated nearly 30,000 people and screened nearly 7,000 women for breast and cervical cancer in four geographic departments in Haiti in 2016-17.
- In 2017-18, we launched a program in an industrial park where we educated 7000 women, screened 5176 for breast cancer, 4005 for cervical cancer, and treated over 1001 for pre-cervical cancer lesions, all at the infirmaries located in the factories.
- For a cancer awareness study in 2016, we also worked with ten CHWs to interview over 400 people from all over Haiti to better understand barriers to understanding and care.



- **Background**: Innovating Health International and Share Hope recently implemented a cancer screening program for working class women in Port-au-Prince.
- Most women work 6 days weekly.
- **Methods**: For 4,000 women, nurses perform clinical breast exam, teach self-breast exam, and instruct patients how to perform vaginal self-swab (Qiagen careHPV) in the factory infirmary.
- Inclusion criteria for women include age 30 to 50 years.
- Women who screen positive for HPV will then be followed with VIA and thermocoagulation.



# Outcomes

- Data collection is not complete.
- Over 6229 women received education on women's cancer
- Of the 4711 women who are eligible for HPV screening (30-50 years of age), 4005 or 85% of those eligible accepted testing.
- Of those tested, 904 or 22 % were HPV-positive and proceeded to VIA.
- For women who are HPV-positive, 55 or 12% were also VIA positive.
- All HPV-positive women received thermocoagulation except for two



- Of all those sensitized, 5232 or 84% chose to have clinical breast exam.
  - 168 women had a positive clinical breast exam, and then breast ultrasound. Three required biopsy.
  - Trained 30 nurses and 2 doctors to perform HPV tests and VIA with thermocoagulation.
  - 97% of those eligible accepted HPV screening with self-sampling
- 
- **Next steps:** Expand access to cancer screening for the rural and working poor through using mobile health technologies and community-based education and screening.



## **HPV/VIA/Mobile colpo/TC**

- Completely mobile and can be disseminated everywhere
- Community-based
- Accompanied by education
- Less expensive
- VIA with EVA is not subjective
- 75% of women won't need pelvic exam
- Combined with SRH and clinical breast exam
- No gas tanks, no doctor, no electricity needed

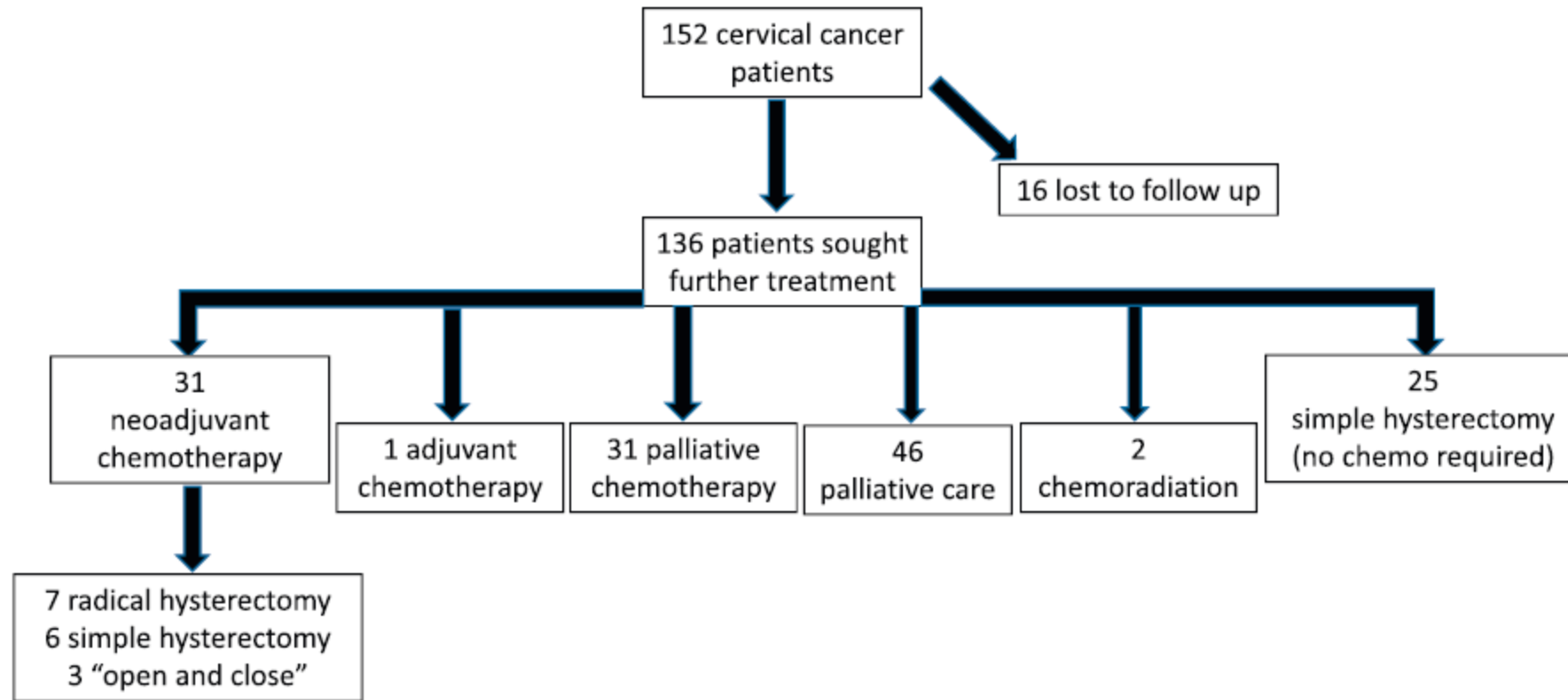
## **Pap Smear/VIA/Cryo/Colposcopy**

- Pap smear-USD \$20 and only in Port-au-Prince
- Cryo requires large gas tanks. Hard to transport and only 2 companies sell them
- VIA by nurses is very variable quality and subjective
- Few doctors trained in colposcopy and fewer colposcopes available
- Pelvic exam for all
- Death is alternative in many LMIC



Treatment

# Chemo and Surgery



# Radical Hysterectomy

- From October 2017 through August of 2019, four foreign-trained gynecologic oncologists trained two Haitian OB/GYNs to perform radical hysterectomies.
- All women Stage IB2 to Stage IIIB received three to six cycles of neoadjuvant chemotherapy (cisplatin, paclitaxel, or most commonly both)
- Over less than two years and during ten visiting trips, two Haitian OB/GYNs learned while performing 47 surgeries for advanced cervical cancer.
- Prior to neoadjuvant chemotherapy, there were 7 cases of Stage I, 25 Stage II, 10 Stage III, and three others who were staged at Stage III were found to be too advanced intraoperatively.
- Complications included two vesiculo-vaginal fistulas and two with urinary incontinence, and one dehiscence wound that led to sepsis and death within six weeks.

The image features a large, dark blue, irregular shape that resembles a splatter or a cloud of ink. This shape is centered on a white background and has several smaller, lighter blue splatters around its edges. The text "The Future" is written in a white, sans-serif font, centered within the dark blue shape.

The Future



# Innovations

1. Combining four mobile health technologies (HPV vaginal self-swabs, battery-operated treatment through thermocoagulation, portable computer-assisted colposcopy for standardization, and portable breast ultrasound with AI) to give women in Haiti a standard of cervical cancer prevention comparable to anywhere else in the world.
2. Screen and treat women anywhere through community-based screening without a doctor or clinics and going directly to where women live and work through use of CHWs and midwives.
3. Improving upon the existing technologies through real-world application in the settings and populations where they are needed most.

- CHWs will provide comprehensive sexual and reproductive health and reproductive cancer education, perform mobile breast ultrasound, and teach women to perform HPV vaginal self-sampling.
- Midwives will use thermocoagulation to treat all HPV-positive women that same day, minimizing loss to follow up
- Through testing AI and mobile technology on thousands of women, we will improve them in exactly the populations and conditions where they are most desperately needed.
- Vaginal HPV self-swab → portable computer-assisted colposcopy → battery-operated thermocoagulation treatment



- InnovatingHealthInternational.org
- KanseAyiti.com

