



www.figo.org

Contents lists available at ScienceDirect

## International Journal of Gynecology and Obstetrics

journal homepage: www.elsevier.com/locate/ijgo



## SEXUAL HEALTH

## Control of cervical cancer: Women's options and rights

Joanna M. Cain<sup>a,\*</sup>, Hextan Ngan<sup>b</sup>, Suzanne Garland<sup>c</sup>, Thomas Wright<sup>d</sup>,FIGO Working Group on Combating Cervical Cancer<sup>1</sup><sup>a</sup> Brown University, Providence, RI, USA<sup>b</sup> University of Hong Kong, Hong Kong, China<sup>c</sup> Royal Women's and Children's Hospital, Melbourne, Australia<sup>d</sup> Columbia University, New York, NY, USA

## ARTICLE INFO

## Keywords:

Cervical cancer control  
Women's rights

## ABSTRACT

Cervical cancer takes the lives of more than 250 000 women each year globally, particularly in under-resourced areas of low-, middle-, and high-income countries. Options for cancer control and treatment have reached a point that there are interventions for control that could be adopted for virtually every resource and demographic situation. Women die despite the availability of attractive control options, which means that educating policy makers, women's health professionals, as well as women themselves, must become a major focus for ongoing control of this disease. The human right to life, to prevention of suffering, and to education are all key rights linked to improving the control of cervical cancer and saving the lives of women, particularly in resource-poor parts of the world.

© 2009 International Federation of Gynecology and Obstetrics. Published by Elsevier Ireland Ltd. All rights reserved.

## 1. Introduction

Cervical cancer takes the lives of more than 250 000 women each year globally, particularly in under-resourced areas of low-, middle-, and high-income countries. It is a disease that can leave women and their families in isolation as a result of bowel and bladder dysfunction, fistula, pain, and bleeding. The World Health Organization notes [1] that the discrepant burden in low-resource countries represents a "...lack of awareness of cervical cancer among the population, health care providers and policy makers; absence or poor quality of screening programmes...; limited access to health care services; and lack of functional referral systems."

Recently, a leap in the potential to control this disease occurred with licensure of an HPV vaccine protective against the two most common oncogenic types, 16 and 18. In addition, new strategies such as novel screening methods to promote screening and treatment in a single visit designed for low-resource settings have recently been demonstrated to be both safe and effective. Options for cancer control and treatment have reached a point that there are interventions that could be adopted for virtually every resource and demographic situation—yet in some countries less than 5% of women have access to any screening or cancer control programs. We have the knowledge and tools to prevent the

burden of this disease and the tragic loss of lives. Failing to implement programs on the global stage will result in generations of women and their families suffering needlessly and denies women their rights to the best available standard of health care as well as life.

Preventing and controlling cervical cancer not only prevents death and disability, but also creates substantial improvement in the health and well-being of families. These women lost to cervical cancer had a universal right to life and a right to the highest attainable standard of health care that was denied them. The options available now as well as the human rights denied by not addressing cervical cancer control argue for new approaches that bind obstetric/gynecologic societies and their members, non-governmental and governmental agencies, women's health advocates and professionals, and pharmaceutical and device manufacturers in a common search for international and country-based approaches to control this disease.

## 2. The opportunity for prevention and treatment

The first element of a control strategy is prevention of exposure to or infection from HPV. Vaccines for primary prevention of up to 70% of the oncogenic HPV infections [2] will be an effective tool if widely implemented in the target ages. While vaccines are preferred, the cost and logistics of keeping vaccines cool are significant and can be a barrier. Countries will have competition for limited healthcare infrastructure and funds as well as confusion about where vaccination for HPV best fits—either in childhood immunization or women's health/maternal health programs. In addition, "Sociocultural sensitivities in this area abound, although concerns about vaccinating

\* Corresponding author. Brown University, Warren Alpert School of Medicine, 101 Dudley Street, Providence, RI 02905, USA. Tel.: +1 401 274 1122x1575.

E-mail address: jmcain@wihri.org (J.M. Cain).

<sup>1</sup> FIGO Working Group on Combating Cervical Cancer: Joanna M. Cain, H. Ngan, T. Wright, M. Jacobs, H. Kitchener, L. Denny, S. Garland, S. Goltz-Shelbaya, C. Trimble. FIGO Secretariat, London, UK.

adolescents against a sexually transmitted infection have been tempered by an emphasis on the vaccine's role in cancer prevention" [4]. This makes a key element—adolescent immunization programs—difficult. Australia has a model government-funded school based program with a 2-year catch-up (to 26) that showed compliance in just under 80% of the school-aged group [5]. If vaccination is not possible, decreasing transmission with physical barriers such as condom use (70% if consistently used), microbicides [3] under development, or decreasing sexual partners are options.

The second element of control is screening for early precursors of the disease. In resource-rich settings, the approach has been to screen with cytology, evaluate positives with colposcopy and biopsy, and treat confirmed lesions using ablative or excision methods. While this has worked well, the resource and infrastructure requirements are difficult in resource-poor settings. The vaccination of a significant cohort of young women will not eliminate the need for a screening scheme, as there will still be generations of unvaccinated women to screen and the vaccine covers only 62%–70% of the potential oncogenic exposures [6]. HPV DNA testing has high sensitivity for identifying cervical cancer precursors with an acceptable specificity when restricted to women aged 30 years and older. Rapid HPV-DNA testing technology is emerging that requires only non-technical support and no electricity, and will overcome the cost and infrastructure needs of current HPV testing [7].

Another alternative for resource-poor settings is the visual inspection after application of acetic acid (VIA) program which screens the cervix and identifies acetowhite areas that possibly indicate a precursor lesion is present. This is helpful in settings where follow-up and transportation are a barrier for women because immediate treatment can occur with both rapid HPV and VIA testing. Data suggest that only up to 20% of women will receive cryotherapy on the basis of VIA screening [8,9].

### 3. Eliminating the burden of disease through standards and options for treatment

Following a diagnosis of cancer of the cervix, improvement in survival depends on access to appropriate management (Table 1) [10]. There are options for fertility preservation for early disease (less than

3 mm of invasion, less than 7 mm width) with a cervical conization with negative margins, which may be offered if close follow-up is possible. The standard therapy remains hysterectomy, with a 5-year survival of over 95%. For early-stage diseases (FIGO stage IB and 2A) the standard treatment remains radical hysterectomy with lymph node dissection or pelvic radiotherapy (external plus brachytherapy). The choice depends on the woman and the available surgical or radiotherapy expertise. Five-year survival is 89% for stage IB1 disease and 75% for stage IB2 and 2A diseases. For more advanced stages, chemo-radiotherapy is the standard, although in resource-poor areas radiotherapy alone can be considered. Five-year survival is 66% for stage 2B, 40% for stage 3, and 10%–20% for stage 4 diseases. With appropriate treatment and follow-up, we can reduce the burden of death from cervical cancer after diagnosis.

Expertise and facilities for treatment should be available ideally to all women. For surgery, special training and expertise in cancer therapy as well as surgical techniques are required for successful outcomes. Lack of adequate surgical theatres and the support team limits access in low-resource settings. For radiotherapy, the lack of trained radiotherapists and supporting team (physicist, radiotherapy technician, and nurse), and the availability of radiotherapy machinery can be problems.

Ideally, a fully organized and accessible cancer program should include follow-up care for detection of adverse effects and complications, and their management. In countries where geographic and economic difficulties preclude easy access, provision of travel costs and means, temporary accommodation near the center, and provision of support to patients and their families should form part of the overall planning. A country-wide program to track cancer and the results of therapy is a key component for all cancer programs.

Long-term follow-up identifies late complications such as lymphedema, urinary problems, irradiation cystitis or proctitis, rectal stricture, fistula or bowel perforation, and sexual problems, which require further management. Psychosexual support for psychological as well as potential sexual difficulties caused by a shortened or narrowed vagina should be encouraged in all settings.

For recurrence, cure depends on the extent of the disease and the type of previous treatment. For patients where cure is not feasible or

**Table 1**  
Access issues concerning cervical cancer by stage.

Cervical cancer stage	Options for management	Issues for access/rights	References
0: Preinvasive disease	1. Primarily treated as part of "see and treat" program (eg. freezing or LEEP) 2. Cervical conization	Multiple trips for therapy may create barrier for women, "see and treat" may eliminate this.	
I: Invasive disease	1. Early microinvasive (<3 mm deep or 7 mm wide) disease has options for fertility preservation with conization and observation. 2. Early invasive disease may have an option for radical trachelectomy, lymph node dissection, but neither long-term outcomes nor randomized trials are complete. 3. Management alternatives are hysterectomy for early microinvasive disease, radical hysterectomy for invasive disease, and radiation therapy for both.	Women have the right to "decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so." Access to these alternatives for fertility preservation are limited geographically, but also by ability for appropriate and consistent levels of follow-up care that require highly sophisticated and expensive healthcare systems. Even access to appropriately trained surgeons and surgical teams may be problematic.	Commission on Human Rights. Resolution 2003/28, para 7.3. ICPD Programme of Action
Stage II, III	1. Some Stage IIA, early IIB may be amenable to radical hysterectomy and node dissection 2. Most are treated primarily with radiation plus concurrent chemotherapy.	Availability of access to appropriately trained surgeons and surgical teams as well as chemotherapy concurrent with radiation may be limited in resource-poor countries. In addition, access to advanced radiation techniques or radiation machines with higher energy may be limited and result in both higher failure rates as well as higher rates of complications.	
Stage IV	IVA may still be amenable to primary treatment with chemo-radiation. Palliative treatment of pelvic IVB lesions may prevent pain and suffering from bleeding of the pelvic mass. Chemotherapy for advanced disease has limited success at this point.		
Recurrent	Radiation therapy after primary surgery or primary exenteration with central recurrence after maximal radiation is possible. Chemotherapy for advanced, recurrent disease has limited success at this point.	Women have a right to maximal treatment for their pain and palliative management of symptoms in the terminal course of disease	

in advanced incurable primary disease, palliative care should be available. Adequate relief of pain is not only an ethical principle for all of medicine; it is a simple human right. Following the analgesic ladder, pain control is possible with mild analgesics, escalating to anti-inflammatory and to narcotic pain medications. Bans on the use of opiates to adequately control pain in terminal diseases deny human rights and are medically unethical. Efforts to assure availability of adequate pain control as well as access to palliative care are important to help these women die with dignity and without suffering.

#### 4. Professional and community ethical obligations

One of the simplest means to respect essential human rights is to educate women about their health options—the essence of autonomy in healthcare ethics. Autonomy requires health professionals to respect a woman's right to choose her care path in light of her beliefs and concerns and to provide the information she needs to choose. Awareness gaps for health professionals as well as women make education a major focus for ongoing control of this disease. Many barriers must be addressed to achieve this simple goal of education. This goal is stymied by lack of general education and literacy, lack of ability to travel, lack of knowledgeable health professionals, and by cultural barriers that allow families or husbands to prevent access for adolescents, daughters or wives even when the opportunity for education exists. Some groups are using patient testimonials to reach out to professionals and women themselves to educate and empower a dialogue with local governments to prioritize the prevention and therapy of this disease [11].

Access to available health may be prevented by social structures that prevent women from making their own authentic choices for healthcare treatment or allow other family members, particularly husbands, brothers, or fathers to control access to either financial or mobility resources to access care. Prioritizing the health care of women in a global culture that devalues women, and prioritizing cervical cancer control with its links to sexual and reproductive health,

which can be controversial and create unique challenges, are essential [12].

Options now exist for prevention, treatment, and palliative care for the wide spectrum of cervical cancer and resource settings. However, failure to act with these denies women their human rights. Women will continue to die needlessly from this disease, particularly in under-resourced areas, unless health professionals and civil society move to adopt means to control cervical cancer in all settings.

#### References

- [1] World Health Organization. Comprehensive Cancer Control: a guide to essential practice. Geneva: WHO; 2006.
- [2] Chan JK, Berek JS. Impact of the human papilloma vaccine on cervical cancer. *J Clin Oncol* 2007;25(20):2975–82.
- [3] Howett MK, Kuhl JP. Microbicides for prevention of transmission of sexually transmitted diseases. *Curr Pharm Des* 2005;11(29):3731–46.
- [4] Agosti JM, Goldie SJ. Introducing HPV vaccine in developing countries—key challenges and issues. *N Engl J Med* 2007;356(19):1908–10.
- [5] Garland SM, Brotherton JM, Skinner SR, Pitts R, Saville M, Mola G, et al. Human papillomavirus and cervical cancer in Australasia and Oceania: risk-factors, epidemiology and prevention. *Vaccine* 2008;26(Suppl 12):M80–8.
- [6] Garland SM, Hernandez-Avila M, Wheeler CM, Perez G, Harper DM, Leodolter S, et al. Quadrivalent vaccine against human papillomavirus to prevent anogenital diseases. *N Engl J Med* 2007;356(19):1928–43.
- [7] Wright TC, Bosch FX, Franco EL, Cuzick J, Schiller JT, Garnett GP, et al. Chapter 30: HPV vaccines and screening in the prevention of cervical cancer; conclusions from a 2006 workshop of international experts. *Vaccine* 2006;24(Suppl 3):S3/251–61.
- [8] Goel A, Gandhi G, Batra S, Bhambhani S, Zutshi V, Schachdeva P. Visual inspection of the cervix with acetic acid for cervical intraepithelial lesions. *Int J Gynecol Obstet* 2005;88(1):25–30.
- [9] Claeys P, De Vuyst H, Gonzalez C, Garcia A, Bello RE, Temmeramn M. Performance of the acetic acid test when used in field conditions as a screening test for cervical cancer. *Trop Med Int Health* 2003;8(8):704–9.
- [10] Pecorelli S, Ngan H, Hacker NF. Staging classifications and clinical practice guidelines gynaecological cancers. London: FIGO; 2006. p. 37–60. Available at: [http://www.figo.org/docs/staging\\_booklet.pdf](http://www.figo.org/docs/staging_booklet.pdf).
- [11] Garland S, Park SN, Ngan HY, Frazer I, Tay EH, Chen CJ, et al. The need for public education on HPV and cervical cancer prevention in Asia. Opinions of experts at the AOGIN Conference. *Vaccine* 2008;26(43):5435–40.
- [12] Hunt P, Bueno de Mesquita J. The Rights to Sexual and Reproductive Health. Human Rights Centre. University of Essex. Available at: [http://www2.essex.ac.uk/human\\_rights\\_centre/rth/docs/TheRightsToSexualHealth.pdf](http://www2.essex.ac.uk/human_rights_centre/rth/docs/TheRightsToSexualHealth.pdf). Accessed January 11, 2008.