



**Processo Seletivo 2019 – 1º Semestre
PROVA GERAL**

Data: 09/11/2018

Número de Inscrição: **00**

Texto 1

Eliminating cervical cancer globally is within reach if governments act

Ian Frazer

We have the unique opportunity to wipe out a cancer that kills 250,000 women worldwide each year

• [News: Australia could become first country to eradicate cervical cancer](#)

Sat 3 Mar 2018 22.00 GMT Last modified on Mon 5 Mar 2018 08.09 GMT

Cervical cancer is caused by infection with papillomavirus. To our knowledge, every case of cervical cancer is initiated by infection with one of about a dozen closely related types of this virus. The same virus types also include one that seems to be responsible for some other genital cancers, and some throat cancer. The good news is that we have effective vaccines to prevent infection with these viruses: there are now three vaccines that have been shown effective – they all prevent the two strains of papillomavirus most commonly responsible for cancer, and one provides protection against another five types that more rarely cause cancer, as well as protection against genital warts.

Australia has been fortunate to have had a government sponsored school based cervical cancer vaccine program since 2007, and studies in Australia have shown that this program has virtually eliminated new infections with the viruses responsible for cervical cancer for girls and boys who were immunised as young teenagers.

Australia also has a world class screening program for cervical cancer prevention, which will become even more effective this year, with a switch to looking for the causative viruses in the samples collected. This will be complemented by screening for abnormal precancerous cells, as used in the previous screening program, if the relevant viruses are found. The screening program has been shown 100% effective at preventing cervical cancer for women who take full part in the program. There is thus a real prospect that, by combining the cervical cancer immunization program, now with the new nine valent vaccine, and the improved screening program, the 200 cases of cervical cancer that occur in Australia each year will drop over the next few years to negligible numbers, and that sometime in my lifetime we will see the last cases of cervical cancer in women who have lived their teenage and adult life in Australia.

The recent announcement by the International Papillomavirus Society that they can envisage a date when cervical cancer will be eradicated globally reflects the opportunity we now have to eliminate, through immunization, a cancer that kills 250,000 women worldwide each year. The international research community has done its bit, by discovering the virus causing cervical cancer, by coming up with the technologies that have enabled the pharmaceutical industry to develop effective vaccines, and by showing, in conjunction with the pharmaceutical companies, that these vaccines, when made available, can be delivered effectively across the globe.

I would now hope to see a commitment from national governments and inter-governmental agencies to implementation of universal cervical cancer immunization programs over the next few years, so that elimination of cervical cancer becomes a reality on a global basis. The challenges are many and should not be underestimated: the vaccines are most effectively delivered to young women by giving two immunisations in their last years in primary school, and this will require the development of complete new vaccine delivery programs. The cost of these programs then needs to be added to the cost of the vaccines themselves, and, before the vaccines can be deployed, education programs for the girls, their parents, and the immunisation teams must be put in place.

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However, It can be done. Bhutan, a small developing world country, with very limited resources, has implemented an effective HPV vaccine program over several years, with near universal coverage. Key to the success of the program, delivered entirely by the Bhutanese themselves, has been government willingness, royal sponsorship, and some financial assistance from the pharmaceutical industry and from international aid. Translating this sort of effort into practice on an international basis is a work in progress. Nearly 50% of girls and boys in the US are now receiving the cervical cancer vaccines, and universal immunisation programs are in place in many European countries, and in Canada.



Australia's new cervical cancer test 'much more sensitive' – Cancer Council

The immunisation programs to eradicate polio virus and measles virus which, like the cervical cancer causing papillomaviruses, only infect humans, have been struggling to achieve universal immunisation and successful disease eradication for some years, and there are risks of donor and program fatigue.

While intergovernmental agencies have a role to play, the focus for international public health interventions is now shifting to making individual governments responsible for their programs, and answerable to their people for their choices as to where to spend the public dollar. As with most public health measures, implementation will require education, dedication, and patience. But, the reward will be a healthier, and therefore happier and more prosperous society. And that's something worth striving for.

- Ian Frazer is a Professor of Medicine at the University of Queensland. As co-inventor of the technology enabling the HPV vaccines he receives through the University of Queensland some income from the sale of these vaccines in the developed world

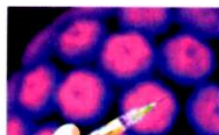
Texto 2

Australia could become first country to eradicate cervical cancer

Free vaccine program in schools leads to big drop in rates, although they remain high in the developing world

- **Ian Frazer: Eliminating cervical cancer globally is within reach**

Naaman Zhou Sat 3 Mar 2018 22.01 GMT Last modified on Sun 4 Mar 2018 03.09 GMT



Australia's free HPV vaccine program in schools has led to a dramatic decline in future cervical cancer rates. Photograph: Voisin/Phanie / Rex Features

Australia could become the first country to eradicate cervical cancer, according to an announcement from the International Papillomavirus Society.

New research, published on Sunday, reveals that Australia's free HPV vaccine program in schools has led to a dramatic decline in future cervical cancer rates.

Within 40 years, the number of new cases is projected to drop to "just a few", professor Suzanne Garland from the Royal Women's Hospital, who led the research, said.



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HPV (human papillomavirus) is a sexually transmitted infection that causes 99.9% of cervical cancers. In 2007, the federal government began providing the vaccine for free to girls aged 12-13 years, and in 2013, it extended the program to boys.

Girls and boys outside those ages but under 19 can also access two doses of the vaccine for free. In 2016, 78.6% of 15-year old girls and 72.9% of 15-year old boys had been vaccinated.

As a result, the HPV rate among women aged 18 to 24 dropped from 22.7% to 1.1% between 2005 and 2015.

Immunisation rates have risen further since 2015, and Garland said high coverage was creating a herd protection effect. "You're getting herd protection in males, just from the female program," she said. "That's pretty amazing."

The University of Queensland's Professor Ian Frazer, the co-inventor of the vaccine, said older women who had never been immunised should also remember to be screened regularly.

In December, the government introduced [a more advanced screening test](#) that could eradicate cervical cancer even sooner, he said.

"As long as we continue the screening program, we will continue to pick up those with the virus already, and as long as we keep up the vaccination, we could have no new cases in 10-20 years.

"Only 50-60% of women participate regularly in the screening program," he said. "If that was 100% we would have no cervical cancer in this country even without the vaccine."

Australia introduced a national cervical screening program in 1991, which involved a pap test every two years. This was replaced in December with a more advanced test that can detect high-risk HPV infections before cancer develops.

Under the new program, women aged 25 to 74 are asked to take the test every five years.

Frazer also said a new vaccine would be used this year to target more virus strains of HPV that caused cancer.

Despite Australia's success, Garland's report found that cervical cancer rates were still high in the developing world.

Frazer said the challenge was a lack of existing vaccination programs for young girls aged 12-14, the optimal time for the vaccine's effectiveness.

"It will be a challenge to get rid of cervical cancer globally," he said. "But the tools are there to do it. We've done the program in Vanuatu and Bhutan, and that shows it doesn't matter what country, if you provide the vaccine for free, people will take it up."

Joe Tooma, the chief executive of the Australian Cervical [Cancer](#) Foundation, said the government could help other countries access the HPV vaccine, which had been invented in Australia.

"Two-thirds of the world's population of women don't get access to what Australian women do," he said.

"Unless we do something, it will still be one of the major cancer killers in developing countries.

"As the country that invented the vaccine, we have an obligation to share it with the rest of the world".



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QUESTÕES

(As questões poderão ser respondidas em português, inglês ou espanhol)

Following two tests from the journal (The Guardian), both published in March, 3th 2018 in sections “*Opinion-Cancer research*” and “*Society*” respectively, intitled “*Eliminating cervical cancer globally is within reach if governments act*” e “*Australia could become a first country to eradicate cervical cancer*” by Ian Frazer (Immunology Professor of the Scholl of Medicine at the University of Queensland e co-inventor of anti-HIV vaccine), and by correspondent from Australia, Naaman Zhou.

Answer the questions bellow according tests:

1. Considering the first text only, write a summary in approximately 10 lines (3,0 pts)
2. Considering the text message, describe it in 3 short highlighted phrases (2,0 pts)
3. In your opinion and adding the message brought with the second text, how can you become the first text more scientific? (2,0 pts)
4. Which is the challenge to eliminate the cervical cancer in the world according the author's opinion? (2,0 pts)
5. Critically, how is the most important sign of conflict of interests in these texts? (1,0 pts)



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GABARITO

1) The abstract should consider:

To highlight about the importance of cervical cancer in public health in the world
Etiology relation between cervical cancer and types of HPV
Types of vaccine to prevent against the most important types of HPV that caused cervical cancer
Australia's experience showed one decrease of cervical cancer incidence after start to do immunization for girls and boys since 2007
Success of the program depends of the population associated to government willing, royal sponsorship, and some financial assistance from the industry and international aid.
Like made with polio and measles virus in the word, working to eliminate HPV virus and consequently cervical cancer should be a challenge.

2) Three highlighted phrases:

HPV types are related directly with cervical cancer genesis
Vaccine anti-HPV applied in girls and boys protect against cervical cancer
Australia's experience after 2007 showed significant decrease of cervical cancer and HPV incidences

3) How can you become the first text more scientific?

The answer should consider information about Australia's free HPV vaccine program and documented results as:
In 2007, the federal government began providing the anti-HPV vaccine for free to girls aged 12-13 years, and in 2013, it extended the program to boys.
Girls and boys outside those ages but under 19 can also access two doses of the vaccine for free. In 2016, 78.6% of 15-year old girls and 72.9% of 15-year old boys had been vaccinated. As a result, the HPV rate among women aged 18 to 24 dropped from 22.7% to 1.1% between 2005 and 2015.
The successful experience also was realized in other different countries as Vanuatu and Bhutan and the author shows it doesn't matter what country, if you provide the vaccine for free, people will take it up.

4) Which is the challenge to eliminate the cervical cancer in the world according the author's opinion?

"The challenges are many and should not be underestimated: the vaccines are most effectively delivered to young women by giving two immunisations in their last years in primary school, and this will require the development of complete new vaccine delivery programs. The cost of these programs then needs to be added to the cost of the vaccines themselves, and, before the vaccines can be deployed, education programs for the girls, their parents, and the immunisation teams must be put in place."

5) Critically, how is the most important sign of conflict of interests in these texts?

The author Ian Frazer is a Professor of Medicine at the University of Queensland. As co-inventor of the technology enabling the HPV vaccines, he receives through the University of Queensland some income from the sale of these vaccines in the developed world