

Development of a thermal coagulator suitable for treatment of cervical precancer in low-resource settings

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Disclosures

- PATH has collaborated with Qiagen in the development and validation of the careHPV test. PATH has collaborated with CryoPen and Liger in the development of new treatment devices. PATH does not receive any revenues from the commercialization of these products. We have not received any funding from those companies.
- I used to have shares in a company in Peru that provides cervical cancer screening services, and now is considering to expand its work to commercialization of medical devices. Currently I do not have any shares in that company and I do not receive any revenues from them.



Cryotherapy:

Misunderstanding the needs of developing countries

1996:

The great advantage of cryotherapy is that it does not need electricity; it requires just gas.



New instruments should be developed
incorporating the learnings from the last 20 years

Effective for curing CIN2-3 lesions.



Exploring new alternatives: Thermal coagulator*

- Tip heated to 120° Celsius.
- It requires electricity.
- 40-second applications.



(*) Formerly known as “cold-coagulator”

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- Effective for curing CIN2-3 lesions.

| Efficacy of thermal coagulation | | | |
|---------------------------------|------|----------------------|--|
| Authors/location | Year | N treated | Efficacy |
| Hussein/Scotland | 1985 | CIN2: 21 CIN3: 33 | <u>CIN2</u> : 95% @ 4 mo <u>CIN3</u> : 85% @ 4 mo |
| Singh/Singapore | 1988 | CIN2/3: 47 | 84% |
| Gordon & Duncan/Scotland | 1991 | CIN3: 1,628 | 95% @ 1 yr 92% @ 5 yrs |
| Williams/England | 1993 | CIN2/3: 125 | 96.5% |
| Zawislak/N Ireland | 2003 | All grades CIN:725 | 87% |



New instruments should be developed incorporating the learnings from the last 20 years

- Effective for curing CIN2-3 lesions.
- **Doesn't require gas or any other supply.**



New instruments should be developed incorporating the learnings from the last 20 years

- Effective for curing CIN2-3 lesions.
- Doesn't require gas or any other supply.
- **Portable.**



Incorporating the learnings from the last 20 years

- Effective for curing CIN2-3 lesions.
- Doesn't require gas or any other supply.
- Portable.
- **Easy to use.**



Feedback from users

- Users with experience working on treatment of pre-cancer.



New instruments should be developed incorporating the learnings from the last 20 years

- Effective for curing CIN2-3 lesions.
- Doesn't require gas or any other supply.
- Portable.
- Standardized treatment procedure.
- Easy to use.
- **Tolerates different cleaning and sterilization procedures.**



Two new thermal coagulators



Next steps

- Generate evidence for thermal coagulation in developing countries.
- Update guidelines and recommendations.
- Train health care providers.



Thank you

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