

Oncogenomics for health professionals – a pilot e-learning addressed to physicians and biologists



TYPE STATUS	Educational Program Pilot (completed)	LAST UPDATE	January 2022	ITALY • NATIONAL/INTERNATIONAL Oncogenomics • Health Literacy
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PROBLEM & OBJECTIVE

- Gaps in the genetic/genomic literacy of health care providers are well documented and hamper the implementation of personalised cancer prevention, diagnosis and treatment.
- Our objective was to develop and test a basic e-learning aimed at improving knowledge, attitude, and practice of health professionals (i.e. physicians and biologists) on the fundamentals of genetics and the main applications of genomic technologies in clinical oncology.

KEY COMPONENTS / STEPS

- Core curriculum of physicians' (general practitioners and all specialties) basic competencies in oncogenomics identified through the literature review and a Delphi consensus process by an international panel of experts [3].
- Identification of the learning objectives (LO) addressing the Core Curriculum and selection of the faculty to develop training materials for each LO.
- Learning method inspired on the Problem-Based Learning (PBL) approach: learning goals identified by participants starting from a Problem related to their professional setting. Learning materials (documents and audio presentations) used by participants to solve the Problem [4].
- All materials prepared in English and in Moodle format (to ease dissemination in Europe).
- Italian CME certification as a key incentive factor for participation (estimated duration: 16h).
- Pre- and post-training tests to allow self-assessment of prior and improved knowledge, respectively.
- Certification questionnaires according to Italian CME standards; satisfaction questionnaire to assess quality and clarity of the content and technical usability of the platform.
- Course's set up on the ISS Distance Training platform EDUISS [2] with separate access for Italian and non-Italian professionals.
- Delivery of the pilot course [5], first in Italy (Apr-Dec 2021) then in other countries (Sept-Dec 2021). Total number of registered users who completed the course: 456 Italian and 55 non-Italian health professionals.
- Assessment of the pilot e-learning through evaluation of questionnaires compiled and comments provided by the participants.

Future steps for implementation:

- Improvement of the e-learning based on users' feedback.
- Translation of the course materials into different European languages (where useful).
- Country-specific CME certification.
- Delivery of the final e-learning through EDUISS and other country-specific distance training platforms for health professionals.
- Coordination with public health and other stakeholders in partner European countries to develop a shared framework of basic and advanced educational activities for health professionals in the field of oncogenomics.

KEY CONTEXTUAL FACTORS

- Requirement that health professionals participate in certified training activities and accrue annual credits to maintain a good standing status.
- Certified Continuing Medicine Education (CME) programs for Health Professionals established at the national level.
- National authorities responsible for CME accreditation [1] and for delivering guide-lines on quality assurance and assessment of CME programs.
- National platform (EDUISS) delivering distance training courses for health professionals [2] based on LMS Totara Learn release 13 (Moodle enterprise evolution; didactic material exportable in Moodle format).
- Dissemination mostly relying on professional associations and national providers of distance learning for health professionals
- Free of charge access.

MAIN IMPACTS / ADDED VALUE

- NGS technologies offer extraordinary opportunities for the advancement of personalized cancer prevention and care. To translate the great potential into real benefit, correct use and clinical application of (germline and somatic) test results are critical. Education of health professionals on genetics- and genomics-related matters has become a priority in oncology practice.
- The cost-effective and versatile distance learning format is optimal to achieve widespread dissemination and to facilitate fruition by a broad target audience.
- Post-test analyses revealed an improved level of knowledge of about 20%.

LESSONS LEARNED

- Based on the satisfaction questionnaire, the e-learning was, overall, very positively judged by both Italian and foreign users with respect to methodology, contents, and platform (mean score 4.5 in a 0-5 scale where 5 is the highest).
- The language (i.e. training held in English) as well as the lack of CME certification in countries other than Italy were identified as major barriers to a wider use of the e-learning. These issues will be fully addressed in the planned future actions.

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REFERENCES & DOCUMENTATION

- National Continuing Education Commission (NCFE-AGENAS)
- EDUISS platform for Distance Training to Health Professionals by the Italian National Institute of Health (ISS)
- Hoxhaj et al. J Cancer Educ 2021
- Calabrò et. al. Frontiers in Genetics 2021
- Leaflet of the IPAAC basic e-learning on Oncogenomics for Health Professionals

More over
[IPAAC](#)
[Roadmap](#)