Improving health quality. Increasing global impact: Africa Perspective

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(From Cameroon)
Some facts about Africa

• Second largest and second most populous continent in the world with 54 countries and population: ca. 1.2 billion
• Over 1 million new cancer cases and 7 hundred thousand deaths per year
• Up to 2000 languages; many languages do not have a word for cancer due to lack of awareness
• Major inequalities in access to care, including radiotherapy
Medical Physics in Africa

• Major shortage of Medical Physicists
• Medical physicists not recognized in many countries in Africa hence major safety concerns in growing use of radiation technologies
• Most Medical Physicists in Africa work in radiotherapy
• Federation for Africa Medical Physics Organizations (FAMPO) key professional society

RT = Radiotherapy
RD = Radiology
NM = Nuclear Medicine
(Source: Federation of African Medical Physicists Organizations)
Key Challenges for Africa

• Care
  • Infrastructure
  • Weak healthcare systems

• Education
  • Limited education and training compounded by brain drain
  • Need for mentorship

• Research
  • Limited resources and capacity for research

• Outreach:
  • Limited awareness, policy, public private partnerships (PPP)
Opportunities: Africa

• **Care**
  - Ongoing initiatives involving Africa
    - Medical Physics for World Benefit
    - Radiating Hope
    - Medical Physicists of the Diaspora for Africa
  - Treat Safely
  - Leap-frogging opportunities using advanced information and communication technologies:
    - Comprehensive Cancer Center in the Cloud (C4): e-consultation, second opinion, e-contouring, remote treatment planning quality assurance support,
Opportunities: Africa

- Education
  - Twinning partnerships between USA or Canadian and African institutions
  - Global Oncology University
    - Workshops UPENN-Tanzania
    - Award-winning collaborative online education platform
  - Degree programs in plan
  - Training by AORTIC, UICC etc
  - International Organization for Medical Physics accredited courses
  - Africa Chartrounds
Opportunities: Africa

• Research
  • Multi-center clinical trials (e.g. in hypofractionated radiotherapy)
  • Co-mentored research collaborations
    • Artificial intelligence
    • Monte Carlo simulations
    • Implementation research
    • Abscopal Radiotherapy
  • FAMPO’s Africa Journal of Medical Physics
  • Increasing funding opportunities for USA-Africa collaborations: e.g. with NCI center for global health
Opportunities: Africa

• Outreach
  • Increased awareness e.g. on cancer
  • Outreach to policy makers e.g. on increased adoption of hypofractionated radiotherapy in Africa increasing access and saving billions of dollars
  • Outreach to Industry: e.g. PPP to establish cancer centers in Africa
  • Outreach to Diaspora: e.g. turning brain drain to global health gain
  • Outreach to professional societies: AAPM, ASTRO, ASCO

Hypofractionated RT increase in access
Ngwa et al. 2020 JCO Global Oncology
Quo Vadis?

• Collaborations are key for global health with Africa
• Future is technology-driven, digital

“It always seems impossible until it is done”, Nelson Mandela
Thank you for your attention!

Let’s work together to:
  improve health quality
  Increase global impact

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