A Pathologist’s Perspective
Pathology Needs and Resources

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What is the Goal of Pathology

- Provide consistently high quality diagnoses
- This must be linked to
  - Capacity to interpret and utilize information for
    - Treatment
    - Follow-up
    - Establishment of registries and biorepositories
Number of People Served By Each Pathologist in Sub-Saharan Africa

Number of People Per Pathologist:
UK*: 15,108
US**: 19,232

*Royal College of Pathologists, 2012, **Anatomic and Clinical Pathologists, AAMC, 2007
Issues in Africa

- Pathology infrastructure is inadequate:
  - Workforce
  - Facilities and equipment
  - Immunohistology
- Supply chain breaks lead to inadequate resource availability.
- Clinicians adapt their clinical practice to exclude pathology.
- Protocols and QA/QC practices may not be optimal.
Systems Needs

- Appropriate and timely fixation for routine and special procedures.
- Efficient transfer of material to pathology
- Receipt and documentation of specimens
- Case tracking
- Reporting
- Archiving
- Basic working equipment for tissue evaluation and processing
- Uninterrupted supply chain of quality reagents
Ideal Fixation

- Secure container
- Appropriate size
  - Small coin (5mm x 2 cm)
- 10:1 volume of 10% formalin to specimen
- Buffered to pH 7.2-7.4
- 6 - 48 h
- Well-fixed tissue gives good histology and will allow advanced testing
  - Immunohistochemistry
  - Molecular diagnostics
Poor fixation = Poor histology
Bad Histology does not always = Bad Fixation

- Don’t reject a case based on “poor” histology
  - Re-embed if necessary
  - Recut and restain
Quality Assurance Needs

- Standard operating procedures and training of personnel at all levels
- Quality control of specimen collection, fixation, processing, tissue sections and staining
- Quality assurance of diagnosis - internal and external review
- Documentation of errors with remediation
- On-site assessment
Establish Best Practices

- Develop SOPs for the African setting
  - Quantify the current state of pathology practices in Africa using the Situational Analysis Survey (underway).
  - Needs Assessment: Identify current QC/QA processes, Determine feasibility, Establish best practices
- Establish an external quality assurance program
- Create standards for telepathology including image requirements, systems, costs, options for communication, etc.
- Develop “Centers of Excellence” demonstration projects.
- Metrics for success and timelines for milestones
Education and Training

- Advocacy: Work with national health services, ministries of health, policy- and decision-makers, and clinicians to advocate for the importance of pathology.
- Develop Histo- and Cyto-tech training.
- Identify bursaries for pathologists to attend relevant professional meetings.
- Promote opportunities for exchange of slides or other training materials, and identify a clearinghouse center that can coordinate this.
Adequate Pathology Resources Can:

- Benefit **clinical services**.
- Inform **cancer control** efforts.
- Aid the development and implementation of **national cancer control plans**.
- Support **cancer registration**.
- Support **research** on a number of levels, including epidemiology, basic science, clinical trials, and translational research.
The Way Forward

- Use data on workforce to effect policy and improve infrastructure and training
- Create standardized protocols and uniform data collection instruments to provide comparable data on disease prevalence
- Reinforce the practice of evidence-based medicine
  - Cost of care is decreased and outcome improved with the correct diagnosis
  - Targeted health programs and pharmacopeia can be established
On the Agenda

- International Academy of Pathology
  - Cape Town Oct 1-5, 2012
  - >200 pathologists from SSA

- Proposed NCI meeting
  - US in March 2013

- Aortic
  - South Africa Fall 2013
The way forward always begins where YOU ARE