cing a patient, c.1905.
RADIOLOGY:
the chest x-ray
X-ray apparatus at St Bartholomew’s Hospital, c.1910.
A case of lymphoma that was treated in September 1901 by W. A. Pusey, Professor of Dermatology in the Medical Department of the University of Illinois. **A:** The patient on September 2, before the start of radiotherapy for lymphoma. **B:** The patient on October 11, 2 weeks after the end of treatment. This seems to be the first documented case of radiotherapy for lymphoma (From Pusey WA. Cases of Sarcoma and of Hodgkin's disease treated by exposures to x rays - a preliminary report. JAMA 1902;38:169, with permission.)
Graph 1

1948–52  All Cases

% CASES ALIVE

YEARS AFTER FIRST TREATMENT
Report of the Committee on the Staging of Hodgkin's Disease

SAUL A. ROSENBERG

Departments of Medicine and Radiology, Stanford University School of Medicine, Palo Alto, California

Report of the Committee on Hodgkin's Disease Staging Classification

Paul P. Carbone (Chairman), Henry S. Kaplan, Karl Musshoff, David W. Smithers, and Maurice Tubiana

National Cancer Institute, Bethesda, Maryland 20014 [P. P. C.]; Stanford University, Stanford, California 94305 [H. S. K.]; Roentgen-Radien-Abteilung, Freiburg, Germany [K. M.]; Royal Marsden Hospital, London, England [D. W. S.]; and Institut Gustave Roussey, Villejuif, France [M. T.]
Lymphogram, CT scan
Report of a Committee Convened To Discuss the Evaluation and Staging of Patients with Hodgkin's Disease: Cotswolds Meeting

By T.A. Lister, D. Crowther, S.B. Sutcliffe, E. Glatstein, G.P. Conellos, R.C. Young, S.A. Rosenberg, C.A. Colman, and M. Tubiana

The Ann Arbor classification for describing the stage of Hodgkin's disease at initial presentation has formed the basis upon which treatment is selected and has allowed comparison of results achieved by different investigators for almost two decades. A meeting was convened to review the classification and modify it in the light of experience gained in its use and new techniques for evaluating disease. It was concluded that the structure of the classification be maintained. It was particularly recommended: (1) that computed tomography (CT) be included as a technique for evaluating intrathoracic and mediastinal lymph nodes; (2) that the criteria for clinical involvement of the spleen and liver be modified to include evidence of focal defects with two imaging techniques and that abnormalities of liver function be ignored; (3) that the suffix 'X' to designate bulky disease (greater than 10 cm maximum dimension) be introduced; and (4) that a new category of response to therapy, unconfirmed/uncertain complete remission (CR[u]), be introduced to accommodate the difficulty of persistent radiological abnormalities of uncertain significance.

Signaling pathways in malignant lymphoma.

Figure 2 - Signaling Pathways in Malignant Lymphoma

Cell proliferation, growth, and survival

Reeder C B, Ansell S M Blood 2011;117:1453-1462
PET/CT

Medical Invention of the year in TIME magazine 2000
Dr David Townsend and Dr Nutt
Closed Workshop:
Lymphoma pretreatment assessment
and response criteria in the New Millennium:
Beyond Ann Arbor

Tuesday, June 14, 2011 – USI Auditorium, Lugano University

Steering Committee: B.D. Cheson, R.I. Fisher, T.A. Lister, E. Zucca
Aims of the workshop

• to improve, standardize and legitimize the current and evolving staging procedures for nodal lymphoma (HL and NHL) and also the criteria for response to therapy

• to achieve a consensus that can last (10 years?) and be relevant for:
  – the community physician
  – investigators'-led trials
  – cooperative phase III trials
  – not necessarily registration trials
Aims

• our relatively ambitious goal is “not likely” to be achieved today
• we hope, however, to determine:
  – what data are already available to help us
  – what more may be required
  – how to get it
  – what should be done (and who is going to do it)
  to possibly have at 12-ICML (June 18, 2013)
another workshop, where consensus may be achieved
Challenges

• Do we need a new staging system?

• Do we want the same system for all histological subtypes?

• Is nodal disease different from primary extranodal lymphoma?

• Can we adopt a simpler staging system (limited vs disseminated)?
Challenges

• How do we assess response?
• How to best assess PR and PD by nodal sites?
• What is the appropriate threshold for PR (50%)
• How do we graduate response in different subtypes?
• PET-avid vs the rest?
• the input of the major cooperative groups will be needed (and perhaps of the FDA and the EMEA)
Staging

Chair: R.I. Fisher, Rochester, NY (USA) and T.A. Lister, London (UK)

PET

Current role – B.D. Cheson, Washington, D.C. (USA)
MSKCC experience with PET in NHL – A.D. Zelenetz, New York, (USA)
Impact of PET staging in advanced HL - A. Gallamini, Cuneo (Italy)
PET and FL staging – M. Federico, Modena (Italy)
PET in the staging of PTCL – J.M. Vose, Omaha, NE (USA)

BULK / VOLUME

How close are we to incorporating bulk disease in the staging system?
- L.H. Schwartz, New York, NY (USA)

BONE MARROW

What are the criteria for bone marrow involvement?
- R.D. Gascoyne, Vancouver, B.C. (Canada)

PROGNOSTIC INDICES

Should we include prognostic indices? – G. Salles, Pierre Benite (France)
Response Assessment

Chair: B.D. Cheson, Washington, D.C. (USA) and S. Barrington, London (UK)

PET

Are different criteria needed for interim vs post-treatment PET; should the threshold for a 'positive' scan vary according to pretest probability, timing of scan, disease type and proposed intervention (ie, descalation vs escalation)? - M. Meignan, Créteil (France)

What is the independent prognostic value of a change in nodal size of a residual mass in addition to FDG findings? – M. Hutchings, Copenhagen (Denmark)

BULK / VOLUME

Relationship between outcome and tumor load reduction – A. Hagenbeek, Amsterdam (Netherlands)

MRD

Potential role of MRD in FL and MCL – M. Dreyling, Munich (Germany)
SURVEILLANCE

• Role of surveillance in HL and NHL – J.O. Armitage, Omaha, (USA)

• PET surveillance in HL – R.H. Advani, Stanford, CA (USA)
PET/CT

Medical Invention of the year in TIME magazine 2000
Dr David Townsend and Dr Nutt
## PET vs CT in HL/NHL Staging

<table>
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<th>Specificity (%)</th>
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</table>
Beyond Ann Arbor

Schwartz
Benign lymphoid aggregates in the BM

Distinguishing these reactive infiltrates from low-grade B cell lymphomas can be challenging

Gascoyne
Discordant BM involvement in DLBCL

Gascoyne
F.L. PROGNOSTIC FACTORS

1 – WHO ARE THEY?
2 – SO WHAT – ABOUT FLIPI 1 or 2?
CONCLUSIONS

PET

STAGING

• We may give up the CXR! $ 65 (data not shown)
• PET should be (already is, “legitimised”) incorporated when clinically appropriate (HL, DLBCL ? FL...)
• More information will become available.
Conclusions

BONE MARROW

• Maintain Status Quo.
• The role of IHC and FLOW remain to be fully defined.

BULK/VOLUME

• Prospective studies needed to identify the importance of different sized lesions (greater than 5, ? 10 cm), if relevant, and volume.
CONCLUSIONS

• It is as well our expectations were modest!
And over to Sally.....(while missing Bruce)