Moleculaire Tumor Boards
A PATH Project

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Disclosure belangen spreker

(potentiële) belangenverstrengeling	Geen
Voor bijeenkomst mogelijk relevante relaties met bedrijven	
• Sponsoring of onderzoeksgeld • Honorarium of andere (financiële) vergoeding • Aandeelhouder • Andere relatie, namelijk …	• IMI, CANCER-ID, KWF • UMCG • •

Omvang van probleem

- 9% van uitgezaaide kankers heeft genomische afwijkingen die herkent worden als biomarker voor behandeling
- 27% van de DNA afwijkingen dienen als biomaker voor drug response buiten het indicatie gebied.
- Complexiteit en grote hoeveelheid data uit moleculaire profielen maakt een expert review via MTB noodzakelijk.
- Enquete: 22% of dokters in tertiaire kanker centra rapporteert gebrek aan genomische kennis (1)

1. Gray et al. JCO, 32:1317, 2014

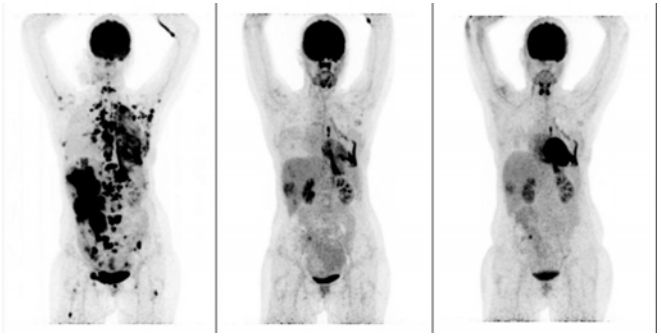
Accessibility of knowledge institutions is poor in Health Care

<50% of hospitals and <5% of non-academic hospitals in the Netherlands had access to MTB

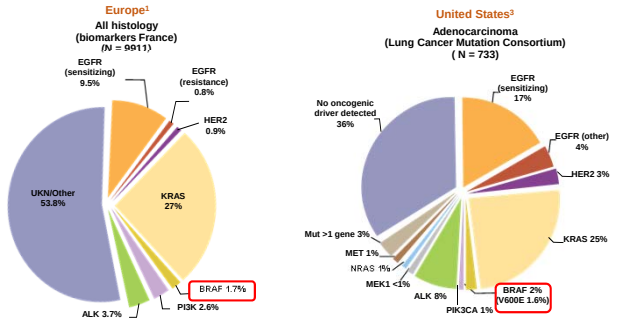
1. Van der Velden et al. Ann Oncol 28:3070, 2017

In current practice about 15-20 tests are applied in lung cancer diagnostic analyses

History/Anamnesis
Functional
Diagnostic



DNA aberrations in NSCLC for targeted therapy



1. Barlesi F et al. *J Clin Oncol*. 2013;31(24):3004-3011. 2. Marchetti A et al. *J Clin Oncol*. 2011;29(26):3574-3579.
3. Kris MG et al. *JAMA*. 2014;311(19):1998-2006. 4. Cardarella S et al. *Clin Cancer Res*. 2013;19(16):4532-4540.

Wat doen andere MTB?

- Sarah Cannon Research Institute UK
- UCL Genomic Review Board
- N=895 pts (1)

1. Report within 7-8 days included actionable genomic alterations and matched treatments and clinical recommendations.
2. 20% referred for off-label or clinical trial. In the end 5% got trial treatment.
3. Variant allele frequency and tumor fraction help to identify germline variants that may be clinically relevant in 13.1%. Referral to clinical geneticist.

- Other Institutions: Curie 17% (2); John Hopkins 15% (3)

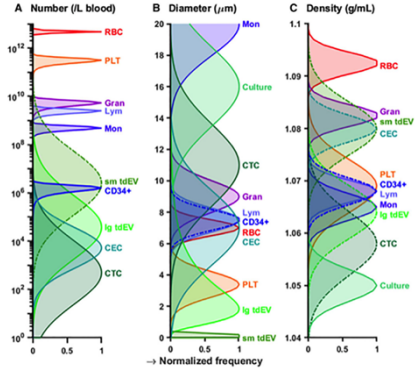
1. Moore et al., ESMO Open, 2019
2. Basse et al., ESMO Open 3:e000339, 2018
3. Dalton JCO Precision Oncol 2017

Advantages above the current system

- Systematic charting of successful and unsuccessful molecular treatments
- Make data quickly public
- MTB across the globe should be well informed.
- Broad testing: whole genome or exome sequencing (1).
- Cost-effectiveness needs to be demonstrated.
- Very dynamic field of ever evolving landscape of new molecular profiling technologies, new biomarkers and treatments
- More patient friendly

Moore et al. ESMO Open 4:2019

Blood derived biomarkers: particles or ctDNA



Conclusions

- Reforming our health system to catch all developments in technologies and novel treatments should be explored.
- Lab technologies and treatments needs a fast implementation to bring better quality to the patient.
- Development of MTB as expert panel should be encouraged to limit excessive developments in lab tech and treatments.