



A02-3 **Function Integrated**

Diagnostic Assistance based on
Multidisciplinary Computational Anatomy

- Plan of Five Years and Progress Overview FY2014 -

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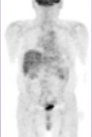



OUR OVERALL PURPOSE

as A02-3 is to investigate image analysis methods based on the **anatomic and functional information fusion** and to establish a methodology of computer-aided diagnostic (CAD) systems for organ and tissue functions. Specifically, our plan is to investigate on three major topics as follows:

Glucose metabolism

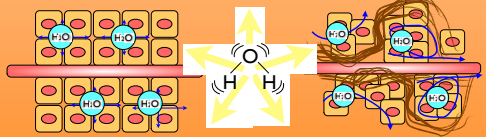
Cancer diagnostic/treatment assist

Pre-treatment  C1OC(O)C(O)C(O)C1O Post-treatment 

Treatment/prognosis evaluation

Water diffusion

Cell fibrillization assessment

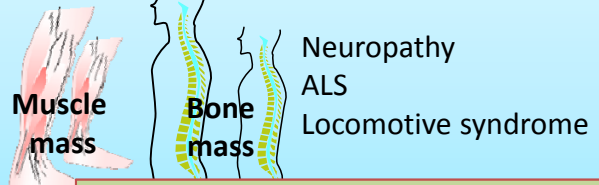


Normal liver cells fibrosis

Tumor/cirrhosis progression evaluation

Body function

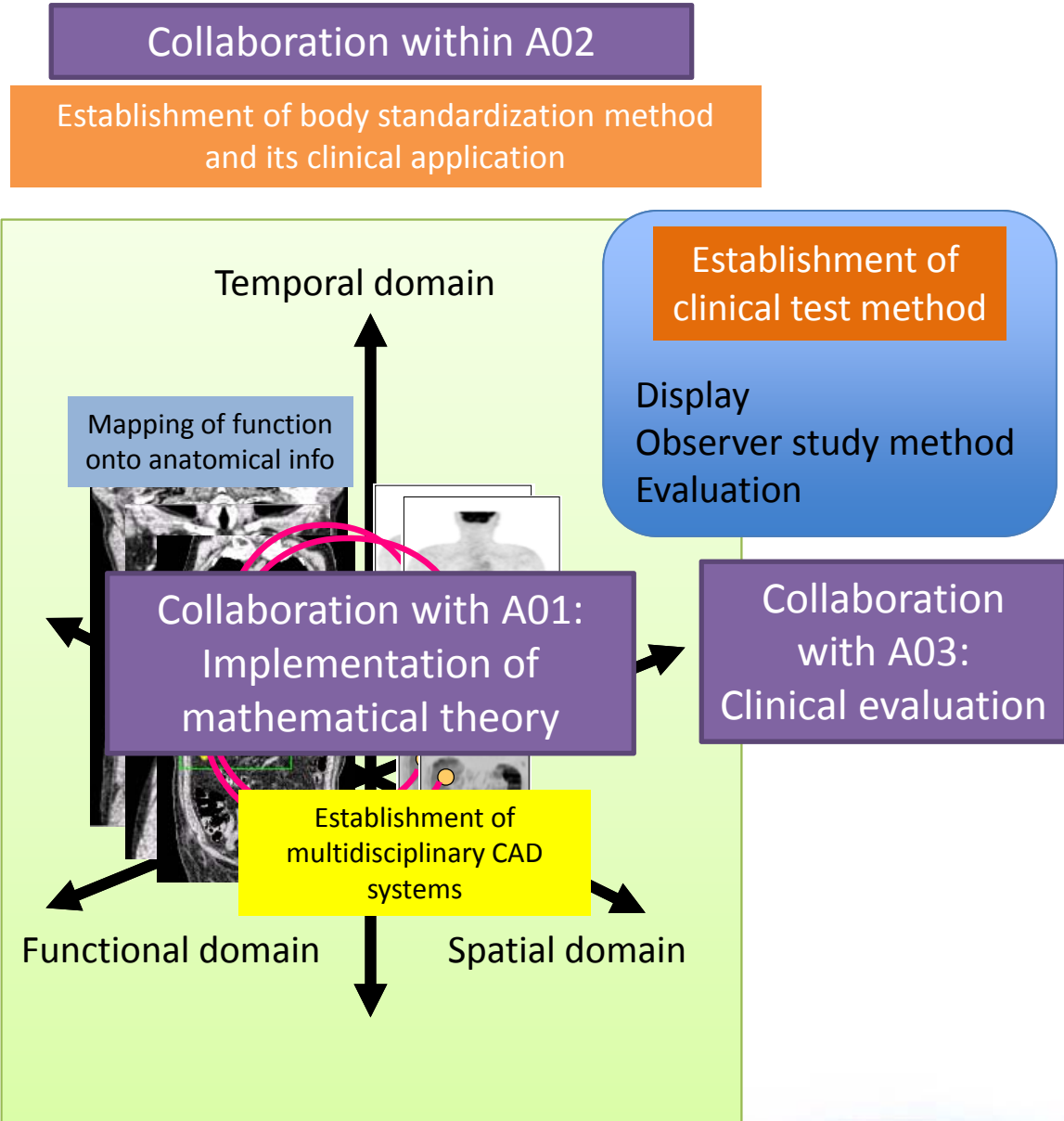
Quantification of functional change



Muscle mass Bone mass

Neuropathy
ALS
Locomotive syndrome

BMD/muscle mass decrease evaluation





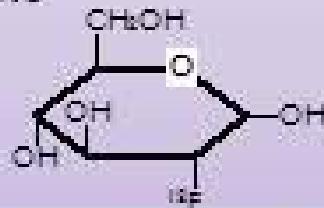
OUR OVERALL PURPOSE

1 CAD systems for functional imaging using RI

Glucose metabolism

Cancer diagnostic/treatment assist

Pre-treatment



Post-treatment



Treatment/prognosis evaluation



PET/CT

SPECT/CT



OUR OVERALL PURPOSE

2

CAD systems
for **water molecular diffusion function**

Water diffusion

Cell fibrillization assessment



Tumor/cirrhosis progression evaluation

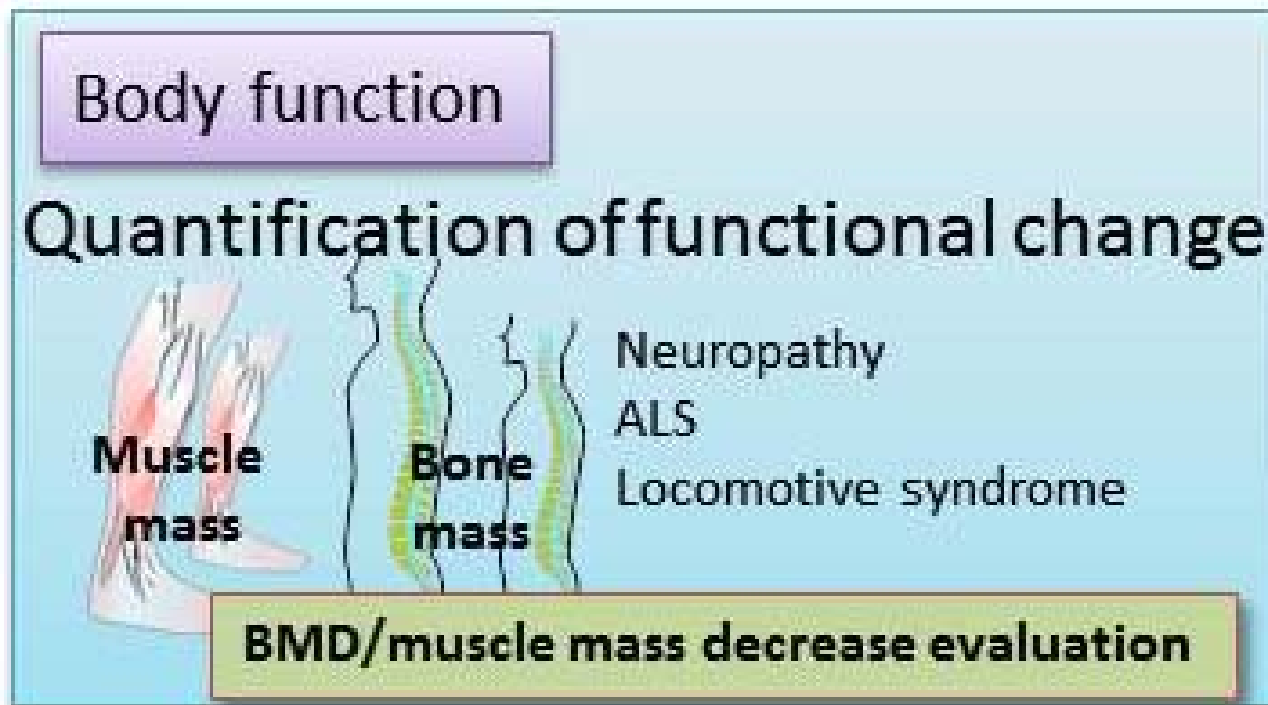


MR/
Whole-body
DWI



OUR OVERALL PURPOSE

3 CAD systems for **muscular** function



CT
US