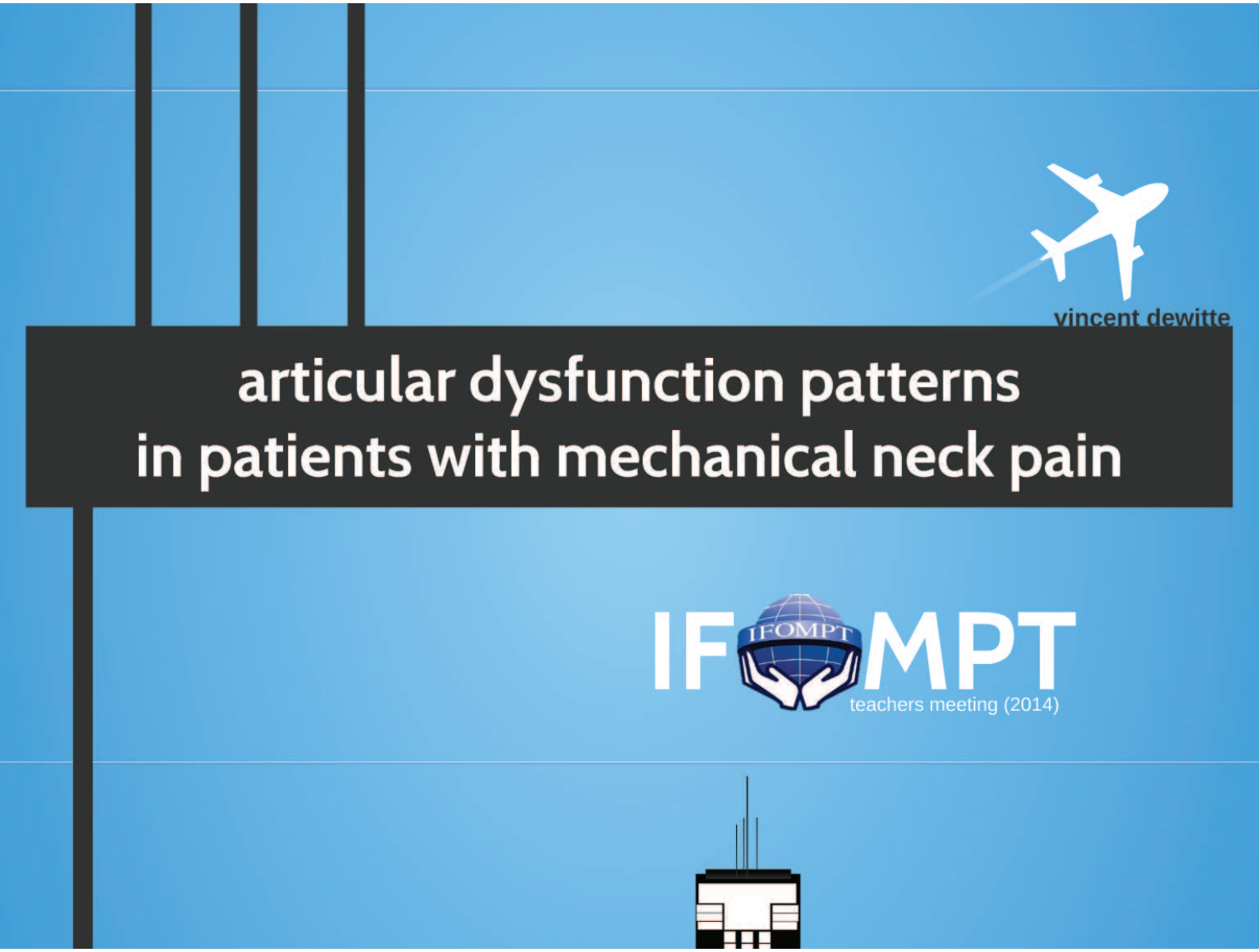


vincent dewitte

articular dysfunction patterns in patients with mechanical neck pain

IFOMPT

teachers meeting (2014)

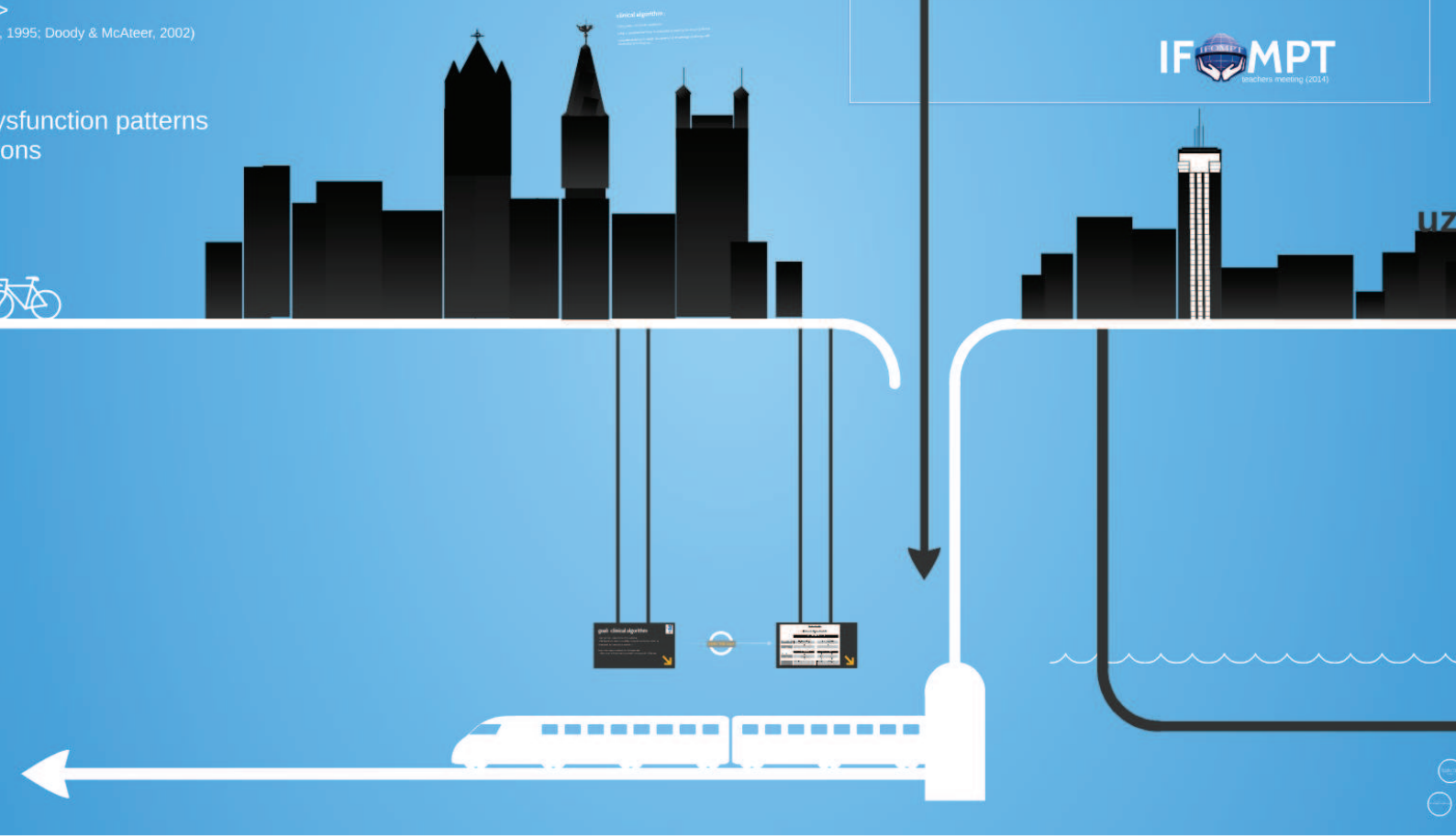
sprouts, when a
ed, and this for
>
, 1995; Doody & McAteer, 2002)

ysfunction patterns
ons

articular dysfunction patterns
in patients with mechanical neck pain

vincent dewitte

IFOMPT
teachers meeting (2014)



goal: clinical algorithm

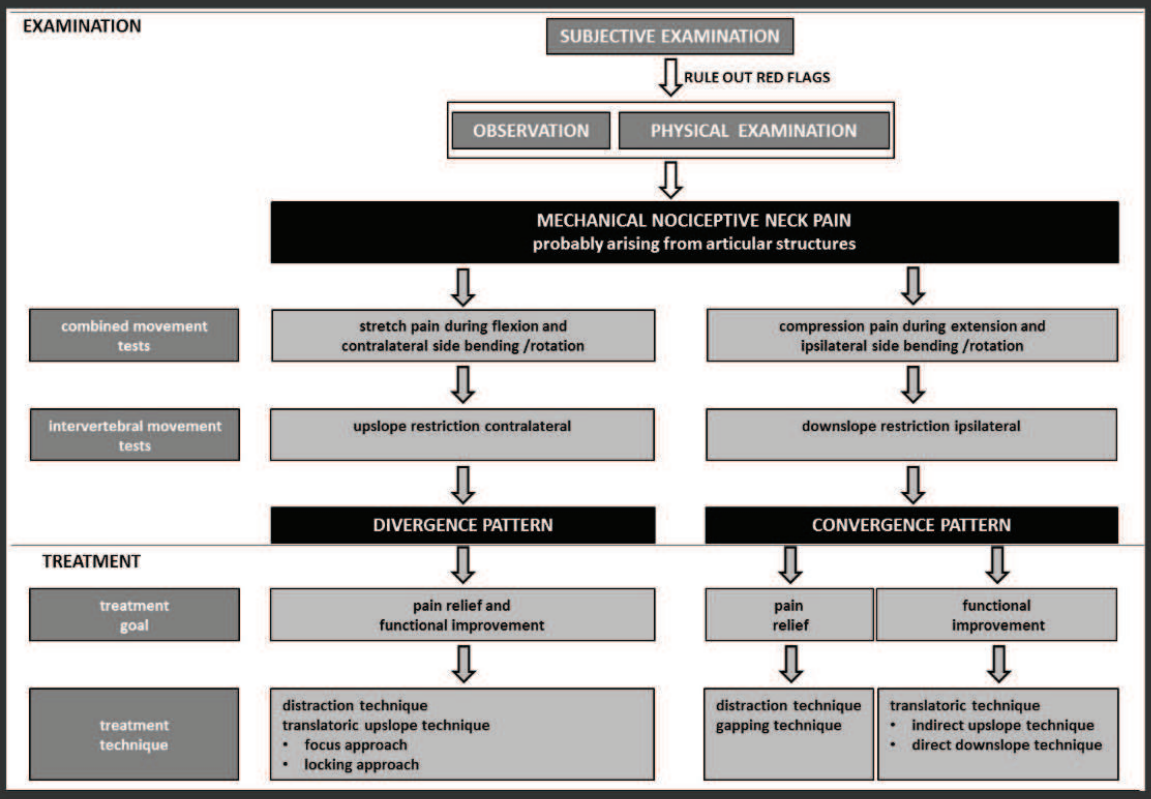
to guide (novice) therapists in their clinical reasoning

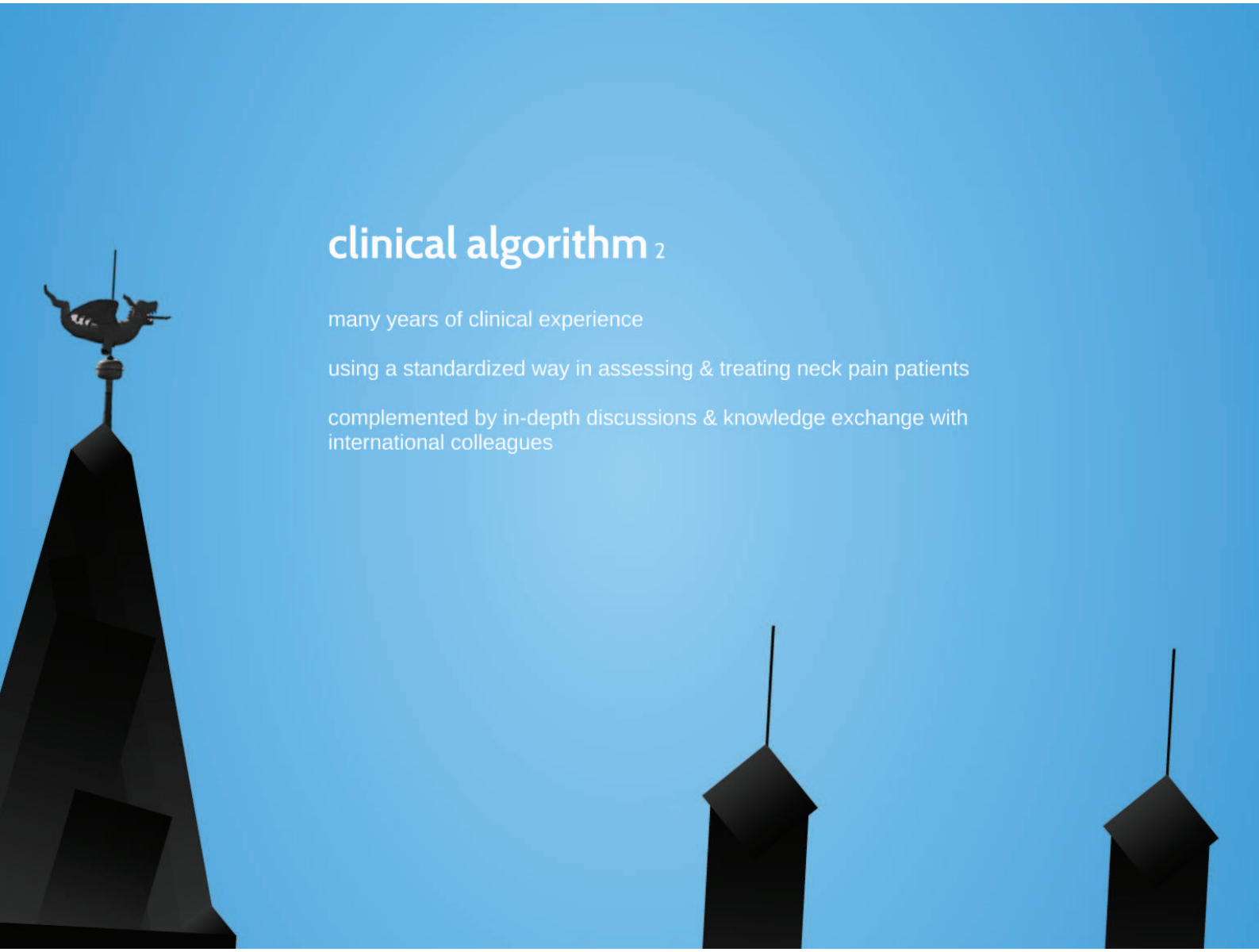
to identify neck pain patients who are likely to respond to mobilization/manipulation

situated within the context of pain mechanisms

based on key features in subjective & clinical examination

to define optimal techniques pending on the individual presentation of the patient


EXAMINATION
SUBJECTIVE EXAMINATION
RULE OUT RED FLAGS
OBSERVATION
PHYSICAL EXAMINATION
MECHANICAL NOCICEPTIVE NECK PAIN
probably arising from articular structures
combined movement tests
stretch pain during flexion and contralateral side bending /rotation
compression pain during extension and ipsilateral side bending /rotation
intervertebral movement tests
upslope restriction contralateral
downslope restriction ipsilateral
DIVERGENCE PATTERN
CONVERGENCE PATTERN
TREATMENT
treatment goal
pain relief and functional improvement
pain relief
functional improvement
treatment technique
distraction technique
translatoric upslope technique
• focus approach
• locking approach
distraction technique
gapping technique
translatoric technique
• indirect upslope technique
• direct downslope technique



clinical algorithm 2

many years of clinical experience

using a standardized way in assessing & treating neck pain patients

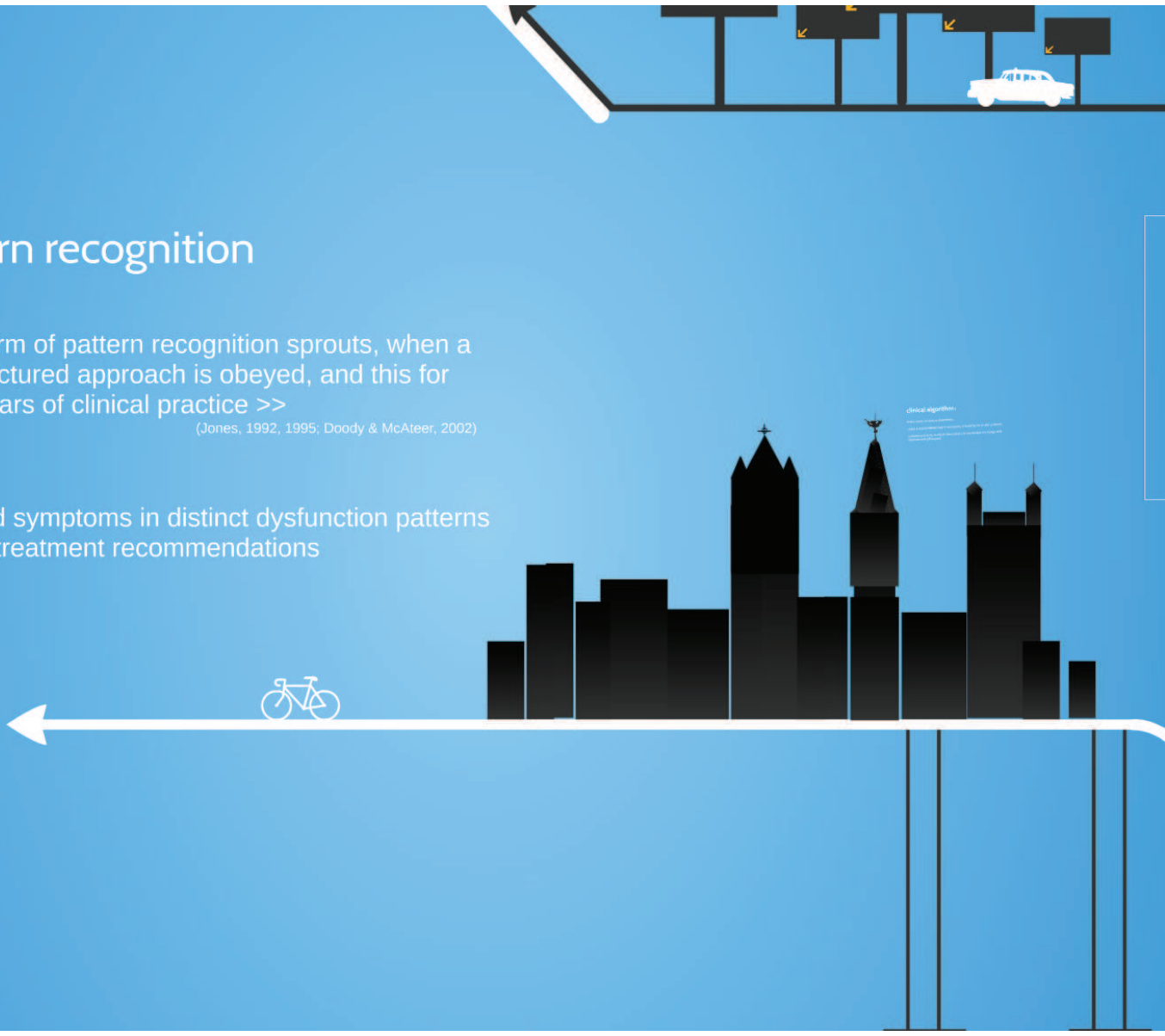
complemented by in-depth discussions & knowledge exchange with international colleagues

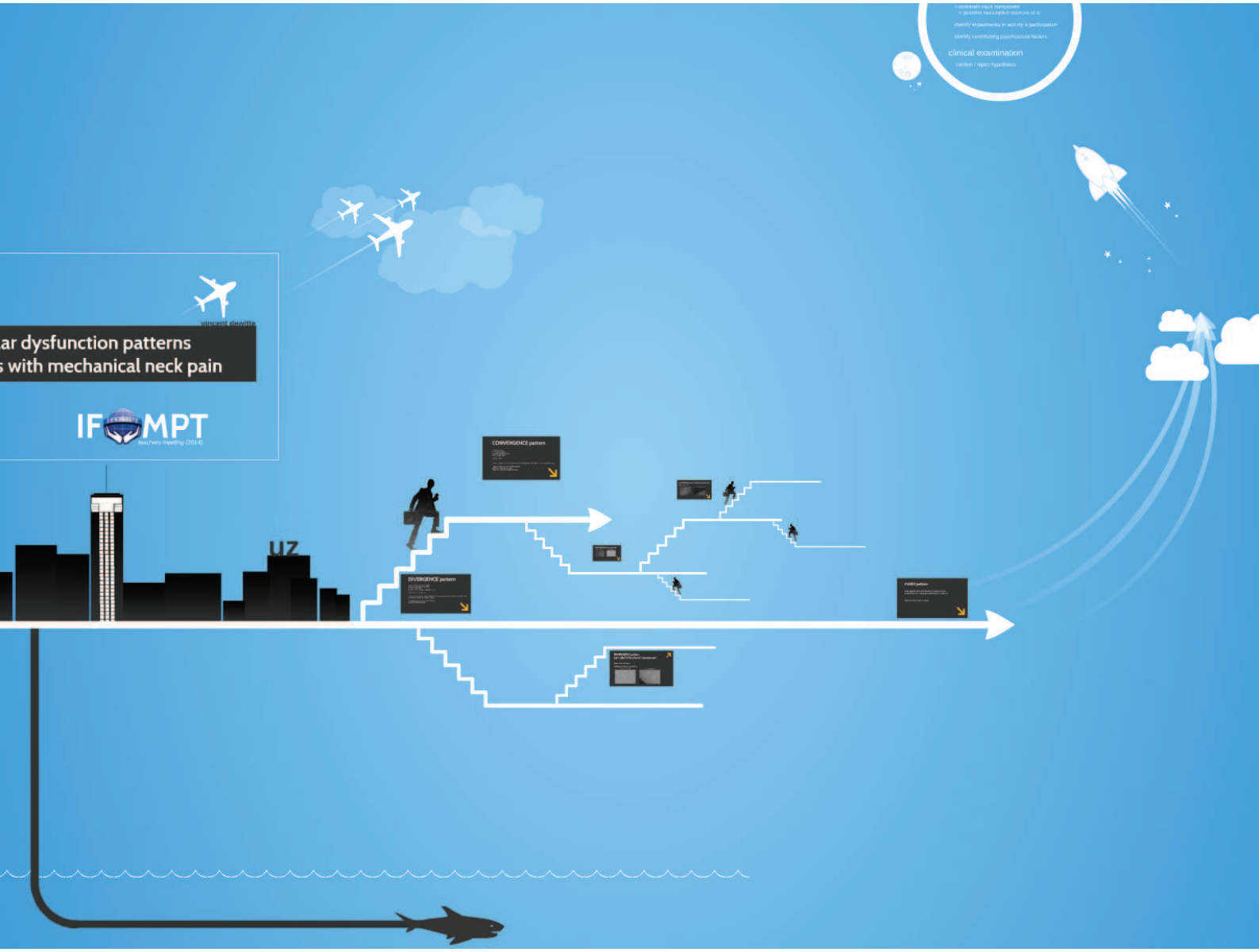
pattern recognition

<< a form of pattern recognition sprouts, when a well-structured approach is obeyed, and this for many years of clinical practice >>

(Jones, 1992, 1995; Doody & McAteer, 2002)

clustered symptoms in distinct dysfunction patterns
specific treatment recommendations




identify impairments in activity & participation
identify contributing psychosocial factors
clinical examination
confirm / reject hypothesis
vincent dewitte
ar dysfunction patterns
s with mechanical neck pain
IF MPT
teachers meeting (2014)
UZ
CONVERGENCE pattern
DIVERGENCE pattern

clinical reasoning

subjective examination

exclude red flags

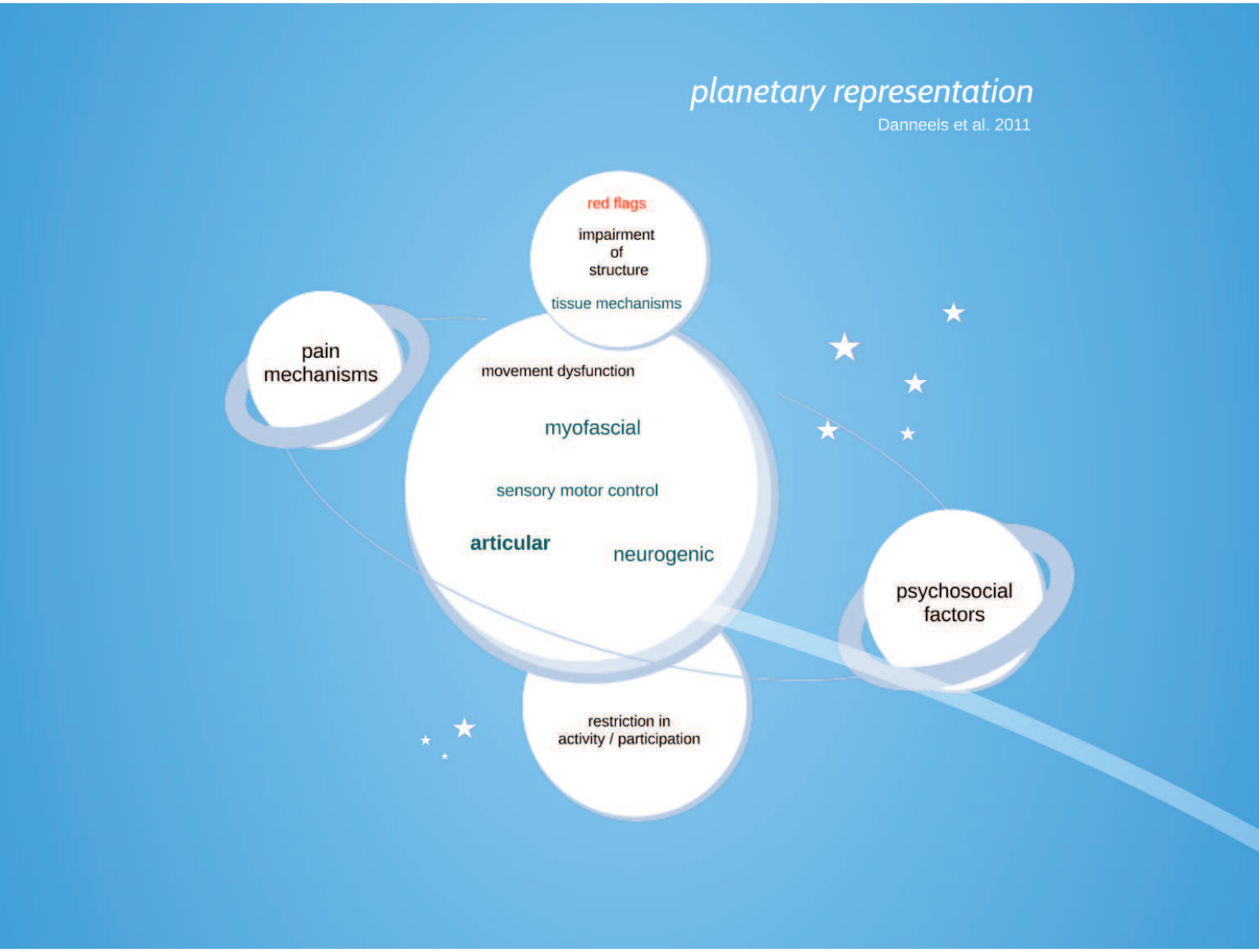
define dominant pain mechanism
> dominant input component
> possible nociceptive sources of s/

identify impairments in activity & participation

identify contributing psychosocial factors

clinical examination

confirm / reject hypothesis


planetary representation
Danneels et al. 2011
red flags
impairment
of
structure
tissue mechanisms
pain
mechanisms
movement dysfunction
myofascial
sensory motor control
articular
neurogenic
psychosocial
factors
restriction in
activity / participation

patients' nociceptive symptoms

the 'articular patient'

no particular recipe or protocol

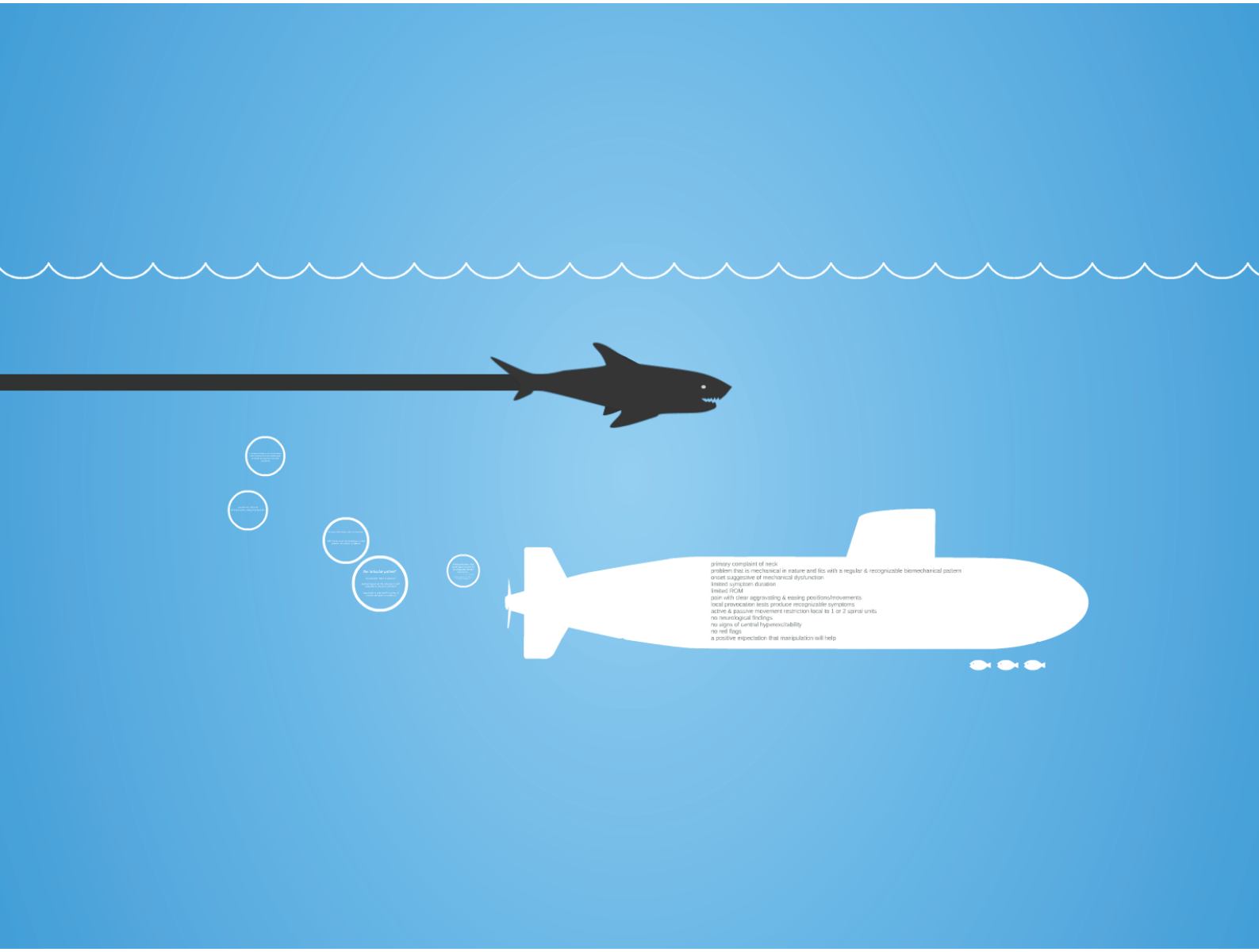
decision based on info collected in both subjective & clinical examination

hypothesis is only valid if a cluster of articular symptoms is endorsed

clinical presentation that would suggest an amenity to manipulative therapy may include ...

(McCarthy, 2001; Hing et al., 2003; Childs et al., 2008; Gellhorn, 2011; Dunning et al., 2012; Puentedura et al., 2012)

primary complaint of neck
problem that is mechanical in nature and fits with a regular & recognizable biomechanical pattern
onset suggestive of mechanical dysfunction
limited symptom duration
limited ROM
pain with clear aggravating & easing positions/movements
local provocation tests produce recognizable symptoms
active & passive movement restriction local to 1 or 2 spinal units
no neurological findings
no signs of central hyperexcitability
no red flags
a positive expectation that manipulation will help


primary complaint of neck
problem that is mechanical in nature and fits with a regular & recognizable biomechanical pattern
onset suggestive of mechanical dysfunction
limited symptom duration
limited ROM
pain with clear aggravating & easing positions/movements
local provocation tests produce recognizable symptoms
active & passive movement restriction local to 1 or 2 spinal units
no neurological findings
no signs of central hyperexcitability
no red flags
a positive expectation that manipulation will help

avoid preoccupation with 1 structure
at the expense of others

(Jones, 1995)

overemphasis on findings which support the articular hypothesis, might lead to ignoring findings that do not support it, possibly leading to incorrect interpretations

(Jones, 1992;1995; Jones et al., 2002)

CONVERGENCE pattern

feeling of locking
movement restriction
unilateral compression pain
often in acute cases

antalgic posture

a/ & p/ combined extension, ipsilateral side bending/rotation is limited & evokes comparable signs

+ve provocation tests at impaired segments
ipsilateral downslope restriction
segmental distraction alleviates the pain

CONVERGENCE pattern

feeling of locking
movement restriction
unilateral compression pain
often in acute cases

antalgic posture

a/ & p/ combined extension, ipsilateral side bending/rotation is limited & evokes comparable signs

+ve provocation tests at impaired segments
ipsilateral downslope restriction
segmental distraction alleviates the pain

CONVERGENCE pattern: pain relief

distraction technique

gapping technique

CONVERGENCE pattern: functional improvement

translatoric technique

indirect - downslope technique

direct - downslope technique

DIVERGENCE pattern

feeling of painful strain at end ROM
movement restriction at end ROM
unilateral stretch pain
high intensity or severity of symptoms is rare

antalgic posture: uncommon

a/ & p/ combined flexion, contralateral side bending/rotation is limited & evokes comparable signs
p/ shoulder elevation: no result on outcome

+ve provocation tests at impaired segments
ipsilateral upslope restriction

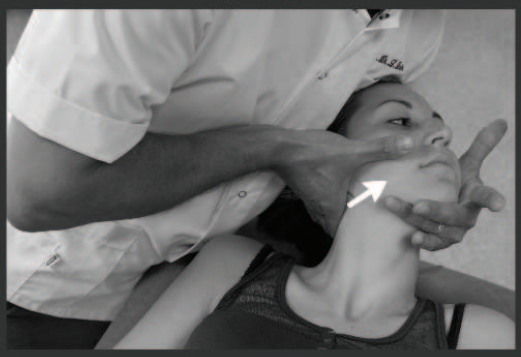
DIVERGENCE pattern: pain relief & functional improvement

distraction technique

translatoric upslope technique

focus approach

locking approach



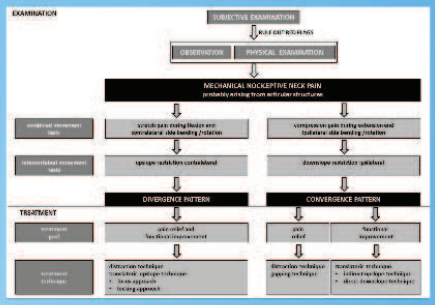
MIXED pattern

multisegmental & multidirectional dysfunctions
combination of convergence/divergence patterns

degenerative cervical spine

to sum up

clinical algorithm : Dewitte et al., 2014



consider the proposed articular dysfunction patterns within a broader perspective

treating patients patients requires a sense of awareness for subtle distinctions, where adaptations entails the key to success