

**APPENDIX C**  
**Knee Quality of Measurement Properties**

ICC=Intra Class Coefficient. MIC=Minimal Important Change.  
SDC=Smallest Detectable Change. LoA=Limits of Agreement.  
AUC=Area Under the receiver operating characteristics Curve.

**Red type= authors comments and findings**

**Yellow highlight indicates the grade assigned to each measurement property**

Author/Journal/Year: Battaglia/Am J Sports/2007

Quality Criteria

Measurement property	Positive	Indeterminate	Negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>Significant association <math>&gt;90</math> LSI and <math>&lt;5</math>mm translation on KT 1000</b>	<b>Correlation with an instrument measuring the same construct <math>\geq 0.50</math> OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs</b>	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with

	the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND correlation with related constructs is higher than with unrelated constructs		the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs
--	--	--	--

COMMENTS: 90% injured playing sports

Author/Journal/Year: Bjorklund/Knee Surg Sports Traumatol/2006

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability Therapist inter-rater kappa tests 6 (0.78), 7 (0.75) are higher Tests 4 (0.64) and 8 (0.69) are lower Intrarater for tests 1-8.	ICC/Weighted Kappa ≥ 0.70 OR Pearson's r ≥ 0.80 10 hop and 5 rep vertical	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa < 0.70 OR Pearson's r < 0.80 single leg squat, crossover hop
Agreement/measurement error NOT TESTED	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity Test 3 single leg squat; Test 6 10 hops for distance; Test 7- 5 rep vertical leap; test 8 crossover hop but all with different methods than the usual. All with Spearman's rho below 0.70 for isokinetic quad	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs

torque at 120 and 180 degress/second.			
Criterion/Predictive validity	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$		Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: 1<sup>st</sup> in a series of 2 by the same author

Author/Journal/Year: Bjorklund/Knee Surg Sports Traumatol/2009

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>Tested vs healthy leg. All 8 tests whether assessed by patient or</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in

therapist were different between legs at both 4 and 8 months post-op	are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs		accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity Did not examine individual tests with IKDC	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness Measured by effect size and standardized response mean of measurements at 4 vs 8 months. See article- many effect sizes calculated- TAK were all above 0.70	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: No patients were top level athletes, but on a scale from 1-5 (where 5 represents top level): 70% were on level 4 and 30% level 3 of the scale- personal communication with author on Dec 2, 2013

Author/Journal/Year: Carter/Br J Sports Med/ 1997

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability NOT TESTED	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error NOT TESTED	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA

Hypothesis testing/Construct validity Correlation between single hop and isokinetic quad strength at 60 deg/sec after rehab- No corr. with hamstring strength. Figure 8 not correlated with either quad or ham strength after rehab	Correlation with an instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs- Quadriceps	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ 0.50 OR $<$ 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs- Hamstring
Criterion/Predictive validity NOT TESTED	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq$ 0.70	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $<$ 0.70, despite adequate design and method
Responsiveness Figure 8 and single hop changed significantly post rehab but their hypothesis that change in JPS with rehab would be correlated to a change in function as measured by hop and 8 run was false- no change in JPS was found	Correlation with an Instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$= <$ 75% of the results are in accordance with the hypotheses OR AUC $<$ 0.70 OR correlation with related constructs is lower than with unrelated constructs

COMMENTS

Author/Journal/Year: Crossley/Journal of Orthopedic Research/2007

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability- Intra only	Hop for distance (ICC=.94) and 6	neither ICC/weighted	Heel rise test (ICC=.57)

	meter hop (ICC=.85)	Kappa, nor Pearson's r determined	
Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>Hop for distance doesn't predict an increase in self- reported function. Hop for distance and 6m hop don't predict an increase in self-reported symptoms of usual and worst pain.</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard ≥0.70	No convincing arguments that gold standard is "gold" OR doubtful design or method	<b>Correlation with gold standard &lt;0.70, despite adequate design and method</b>
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND	Solely correlations determined with unrelated constructs	=< 75% of the results are in accordance with the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs

	correlation with related constructs is higher than with unrelated constructs		
--	--	--	--

COMMENTS:

Author/Journal/Year: Eastlack/MSSE/1999

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>Pearson product to determine correlation with laxity</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	<b>Correlation with an instrument measuring the same construct <math>&lt;</math> 0.50 OR <math>&lt;</math> 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs</b> <b>No correlation of hop tests with laxity</b>
Criterion/Predictive validity <b>Multiple regression to determine the ability of variables to predict a copier/noncopier. Crossover hop was one of 4 variables that predicted copier vs non-copier.</b>	<b>Convincing arguments that gold standard is "gold" AND correlation with gold standard <math>\geq 0.70</math></b> <b>Crossover hop</b>	No convincing arguments that gold standard is "gold" OR doubtful design or method	<b>Correlation with gold standard <math>&lt; 0.70</math>, despite adequate design and method</b> <b>All other hop tests</b>

Discriminant analysis showed the final multiple regression equation that included global rating, KOS Sport, Quadriceps Index, and crossover hop has SN 97 SP 92 for predicting copers and noncopers			
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Gauffin/Int J Sports Med/1990

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity There was a difference in 1 leg hop between	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of



injured and non-injured leg but with no correlation with quadriceps or hamstrings peak muscle torque (strength)	75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs- <b>Descriminant</b>		the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs <b>Convergent</b>
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Holm/Clin J Sport Medicine/2004

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA

Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>No statistically significant change in hop, triple jump, or stair hop tests with an ACL prevention program</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	<b><math>\neq &lt; 75\%</math> of the results are in accordance with the hypotheses OR AUC <math>&lt; 0.70</math> OR correlation with related constructs is lower than with unrelated constructs</b>
Predictive validity			

COMMENTS: **Internal responsiveness**

Author/Journal/Year: Hurd/Am J Sports Med/2008

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR	neither ICC/weighted Kappa, nor	ICC/Weighted Kappa $< 0.70$ OR

	Pearson's r ≥0.80	Pearson's r determined	Pearson's r < 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>Timed 6 m hop is a significant predictor of self-rated global function and KOS- ADLS. Single hop, crossover hop, triple hop not predictive</b>	<b>Convincing arguments that gold standard is "gold" AND correlation with gold standard ≥0.70</b>	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard <0.70, despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	=< 75% of the results are in accordance with the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: examines Criterion/Predictive validity

Author/Journal/Year: Koutras/Int J Sports Med 2009

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness Single hop, triple jump, and vertical jump significantly improved with rehab (regardless of what type) between the 2 <sup>nd</sup> and 5 <sup>th</sup> week in the healthy leg of those with partial	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq$	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

meniscectomy	0.70 AND correlation with related constructs is higher than with unrelated constructs		
--------------	---	--	--

COMMENTS:

Author/Journal/Year: Myer/JOSPT/2011

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity LSI for Single hop, triple hop, and, crossover hop are all different in ACL repaired vs healthy controls.	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with

	the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND correlation with related constructs is higher than with unrelated constructs		the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs
Predictive validity	NO		

COMMENTS: **timed 6 m hop and all tests that use 2 legs show no difference in the 2 groups. Discriminant validity.**

Author/Journal/Year: Nagano/the Open Sports Medicine Journal/2010

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability YBT Intraclass correlations Ant .78; postmed .76; postlat .71; composite .76	ICC/Weighted Kappa ≥ 0.70 OR Pearson's r ≥0.80	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa < 0.70 OR Pearson's r < 0.80
Agreement/ measurement error NOT TESTED	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity NOT TESTED	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive	Convincing	No convincing	Correlation with

<p>validity</p> <p>Alone YBT anterior has moderate correlation with peak knee flexion angle.</p> <p>As part of a model of 4 tests, YBT ant predicts 29% of the variance of peak knee flexion angle</p>	<p>arguments that gold standard is “gold” AND correlation with gold standard <math>\geq 0.70</math></p>	<p>arguments that gold standard is “gold” OR doubtful design or method- for peak knee flexion</p>	<p>gold standard <math>&lt; 0.70</math>, despite adequate design and method- for peak knee valgus</p>
<p>Responsiveness</p> <p>NOT TESTED</p>	<p>Correlation with an Instrument measuring the same construct <math>\geq 0.50</math> OR at least 75% of the results are in accordance with the hypotheses OR AUC <math>\geq 0.70</math> AND correlation with related constructs is higher than with unrelated constructs</p>	<p>Solely correlations determined with unrelated constructs</p>	<p><math>\leq 75\%</math> of the results are in accordance with the hypotheses OR AUC <math>&lt; 0.70</math> OR correlation with related constructs is lower than with unrelated constructs</p>

COMMENTS:

Author/Journal/Year: Noyes/Am J Sports Med/1991

Quality Criteria

Measurement property	Positive	Indeterminate	negative
<p>Reliability</p> <p>NOT TESTED</p>	<p>ICC/Weighted Kappa <math>\geq 0.70</math> OR Pearson's r <math>\geq 0.80</math></p>	<p>neither ICC/weighted Kappa, nor Pearson's r determined</p>	<p>ICC/Weighted Kappa <math>&lt; 0.70</math> OR Pearson's r <math>&lt; 0.80</math></p>
<p>Agreement/ measurement error</p> <p>NOT TESTED</p>	<p>MIC <math>&gt;</math> SDC or MIC outside LoA</p>	<p>MIC not determined</p>	<p>MIC <math>\leq</math> SDC OR MIC equals or inside LoA</p>
<p>Hypothesis testing/Construct validity</p>	<p>Correlation with an instrument measuring</p>	<p>Solely correlations determined with unrelated constructs</p>	<p>Correlation with an instrument measuring</p>

Multiple linear regressions showed only 1 relationship was found: single hop symmetry with self-report of full giving way with a correlation of 0.28	the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs		the same construct $<$ 0.50 OR $<$ 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity Single hop- SN52;SP 97;LR+17.3 Timed hop- SN49;SP92;LR+6.13 abnormal limb symmetry in an ACL deficient knee (SN)	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq$ 0.70	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $<$ 0.70, despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$= <$ 75% of the results are in accordance with the hypotheses OR AUC $<$ 0.70 OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: this is an oft-cited article

Author/Journal/Year: Purdam/PT in Sport/2003

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability They tested whether pain rating (an indicator of	ICC/Weighted Kappa $\geq$ 0.70 OR Pearson's r	neither ICC/weighted Kappa, nor Pearson's r	ICC/Weighted Kappa $<$ 0.70 OR Pearson's r



loading the correct structure) during the tests was reliable in a 3 hour test-retest	$\geq 0.80$ Used typical error measurement (TEM)	determined	$< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NT</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness The single leg decline squat and hop tests demonstrated increased pain scores after intensive training	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$= < 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: Decline single leg squat and hop both significant but authors recommend squat as more reliable. They feel it detects a change in pain with training and therefore, loads the patellar tendon. They suggest using it as an exercise in patients with jumper's knee

Author/Journal/Year: Ross/Knee Surg Sports Traumatol Arthrosc/2002  
Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability Hop test index ICC 0.94	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error NOT TESTED	MIC > SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity Correlation between single hop and KOS (.36), Peak quad torque (.30), and laxity (KT 1000) (.14) were low	Correlation with an instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ $\geq$ 0.50 OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity NOT TESTED	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness NOT TESTED	Correlation with an Instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is

	are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs		lower than with unrelated constructs
--	--	--	--------------------------------------

COMMENTS: # of concomitant knee injuries was the strongest predictor. Used correlation matrix between independent variables and eliminated 1 of any 2 with a correlation of 0.70 before doing stepwise regression

Author/Journal/Year: Ross/J Orthop Traumatol/2010

Quality Criteria

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq$ 0.70 OR Pearson's r $\geq$ 0.80	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $<$ 0.70 OR Pearson's r $<$ 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity	Correlation with an instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ 0.50 OR $<$ 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq$ 0.70	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $<$ 0.70, despite adequate design and method

Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	=< 75% of the results are in accordance with the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs
-------------------------------------	--	--	--

COMMENTS: **Single hop + isokinetic quad strength + laxity via KT test explained only 1% of the variance in self-reported function during ADL and Sport FABQ and additional knee surgery predicted 61%**

Author/Journal/Year: Svensson/Knee Surg Sports Traumatol Arthrosc/2006

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq$ 0.70 OR Pearson's r $\geq$ 0.80	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa < 0.70 OR Pearson's r < 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs

	constructs		
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>Significant change from pre-op to 2 Year post-op after rehab in both graft groups</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: The study showed that the hop test improves from baseline to 2 Years post-op in ACL patients (internal responsiveness). Did not correlate these change scores with a Criterion/Predictive standard so did not examine external responsiveness.

Author/Journal/Year: Tegner/Am J Sports Med/1986

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>ACL deficient compared to normal male soccer players.</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of

ACL deficient patients hop significantly shorter and run more slowly up/down stairs and slopes	75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs		the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: a frequently cited article. Discriminant validity.

Author/Journal/Year: Witvrouw/Scand J Med Sci Sports/2002

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability Intratester ICC = 0.88 of the triple jump	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis	Correlation with an	Solely correlations	Correlation with an

testing/Construct validity <b>Compared ascending step test, descending step test, squat test, and triple jump showed no correlation with functional outcome as measured by total Kujala score</b>	instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	determined with unrelated constructs	instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Zouita/Annals of Phys and Rehabilitation Medicine/2009

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$

Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>No difference between ACLR and age-matched normals 2 Years post-surgery in the hop test</b>	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct < 0.50 OR < 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is “gold” AND correlation with gold standard ≥0.70	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard <0.70, despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	=< 75% of the results are in accordance with the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Barber/CORR/ 1990

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
-------------------------	----------	---------------	----------



Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity Single leg vertical leap and both shuttle tests fail to distinguish functional deficits in ACL deficient knees. Single hop and timed hop correlates significantly with self-reported limitations in sprinting and jumping/landing	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs Single hop and timed hop	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs single leg vertical and shuttle
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

	unrelated constructs		
--	----------------------	--	--

COMMENTS: This may be the article that established 85% LSI as “normal” but this was only for the 1-legged hop and timed hop. Only 60% of ACL deficient patients performed abnormally on 1 of 2 hop and timed hop tests.

Author/Journal/Year: Brosky/JOSPT/1999

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability Single hop, timed hop, vertical hop .88-.97 Intrarater ICC	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/measurement error NOT TESTED	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity NOT TESTED	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity NOT TESTED	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness NOT TESTED	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with

	75% of the results are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs		related constructs is lower than with unrelated constructs
--	--	--	--

COMMENTS: Authors point out inherent weaknesses in functional testing: 1. Lack of universal standards 2. They are premeditated and planned and sporting activity requires reaction to ever-changing situations.

Author/Journal/Year: Grindem/Am J Sports Med/ 2011

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq$ 0.70 OR Pearson's r $\geq$ 0.80	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $<$ 0.70 OR Pearson's r $<$ 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq$ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ 0.50 OR $<$ 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>Single hop is the only test predictive</b>	<b>Convincing arguments that gold standard is "gold" AND</b>	No convincing arguments that gold standard is "gold" OR	<b>Correlation with gold standard <math>&lt;</math> 0.70, despite adequate</b>

of IKDC function at 1 Year. Crossover hop, 6m hop, and triple hop are not predictive of function as measured by the IKDC	correlation with gold standard $\geq 0.70$	doubtful design or method	design and method crossover, 6m timed, triple
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Logerstedt/Am J Sports med/2012

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in

	with the hypotheses AND correlation with related constructs is higher than with unrelated constructs		accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity None of the 4 hop tests, when performed pre-op, predicted function (IKDC) at 1 Year. All 4 tests at 6 months significantly predicted outcome at 1 Year with 6m timed and crossover being the strongest individual predictors	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$ 6 mos >>> 1 yr	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method pre-op >>> 6 months
Responsiveness NOT TESTED	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Ostenberg/Scand J Med Sci Sports/1998

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability NOT TESTED	ICC/Weighted Kappa $\geq 0.70$ OR	neither ICC/weighted Kappa, nor	ICC/Weighted Kappa $< 0.70$ OR

	Pearson's r ≥0.80	Pearson's r determined	Pearson's r < 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC > SDC or MIC outside LoA	MIC not determined	MIC ≤ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>No relationship between isokinetic testing of the knee and functional tests (1 leg hop, triple jump, vertical jump, 1 leg raising and square hop)</b>	Correlation with an instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	<b>Correlation with an instrument measuring the same construct &lt; 0.50 OR &lt; 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs</b>
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard ≥0.70	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard <0.70, despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct ≥ 0.50 OR at least 75% of the results are in accordance with the hypotheses OR AUC ≥ 0.70 AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	=< 75% of the results are in accordance with the hypotheses OR AUC < 0.70 OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Risberg/Scand J Med Sci Sports/1995

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability Test-retest (intratester) reliability for figure 8, vertical jump, triple jump, and stair hop all between .81 and .97	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>NOT TESTED</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

	correlation with related constructs is higher than with unrelated constructs		
--	--	--	--

COMMENTS:

Author/Journal/Year: Wilk/JOSPT/1994

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>Significant but low correlations between single hop, single leg timed hop, and triple crossover hop and both a subjective knee score and knee extensor peak torque at 180 degrees/sec</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ $0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is "gold" OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with



	75% of the results are in accordance with the hypotheses OR AUC $\geq$ 0.70 AND correlation with related constructs is higher than with unrelated constructs		related constructs is lower than with unrelated constructs
Predictive validity	<b>NO</b>		

COMMENTS:

Author/Journal/Year: Augustsson/ Knee Surg Sports Traumatol Arthrosc/2004  
Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq$ 0.70 OR Pearson's r $\geq$ 0.80	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $<$ 0.70 OR Pearson's r $<$ 0.80
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>Hop test and fatigued hop test significantly different in post-op ACL healthy leg vs repaired leg and the fatigued hop test has a significantly lower LSI 89<math>\pm</math> 8 compared to the hop 97<math>\pm</math> 5</b>	<b>Correlation with an instrument measuring the same construct <math>\geq</math> 0.50 OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs</b>	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $<$ 0.50 OR $<$ 75% of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs
Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is "gold" AND correlation with	No convincing arguments that gold standard is "gold" OR doubtful design or	Correlation with gold standard $<$ 0.70, despite adequate design and method

	gold standard $\geq 0.70$	method	
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS:

Author/Journal/Year: Jerre/Scan J Med Sci Sports/2001

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability <b>NOT TESTED</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside LoA
Hypothesis testing/Construct validity <b>No difference between recreational and competitive athletes in the hop test 2-5 Years after ACL reconstruction.</b>	Correlation with an instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	Correlation with an instrument measuring the same construct $< 0.50$ OR $< 75\%$ of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs

Criterion/Predictive validity <b>NOT TESTED</b>	Convincing arguments that gold standard is “gold” AND correlation with gold standard $\geq 0.70$	No convincing arguments that gold standard is “gold” OR doubtful design or method	Correlation with gold standard $< 0.70$ , despite adequate design and method
Responsiveness <b>NOT TESTED</b>	Correlation with an Instrument measuring the same construct $\geq 0.50$ OR at least 75% of the results are in accordance with the hypotheses OR AUC $\geq 0.70$ AND correlation with related constructs is higher than with unrelated constructs	Solely correlations determined with unrelated constructs	$\leq 75\%$ of the results are in accordance with the hypotheses OR AUC $< 0.70$ OR correlation with related constructs is lower than with unrelated constructs

COMMENTS: Hop tests not discriminant in the long term

Author/Journal/Year: Vandermeulen/Physiother Canada/2000

Quality Criteria:

Measurement property	Positive	Indeterminate	negative
Reliability Test-retest <b>Lateral hop distance ICCs acceptable (Male .83 left and .89 right; female .85 left, .86 right) but LSI for lateral hop not. Forward hop ICCs also acceptable (Male .84 left and .92 right; female .89 left, .91 right)</b>	ICC/Weighted Kappa $\geq 0.70$ OR Pearson's r $\geq 0.80$ for distances	neither ICC/weighted Kappa, nor Pearson's r determined	ICC/Weighted Kappa $< 0.70$ OR Pearson's r $< 0.80$
Agreement/ measurement error <b>NOT TESTED</b>	MIC $>$ SDC or MIC outside LoA	MIC not determined	MIC $\leq$ SDC OR MIC equals or inside

			LoA
<p>Hypothesis testing/Construct validity</p> <p>Hop does not correlate with Tegner activity rating or self-rated stability. Lateral hop left correlates with stability rating and right with Tegner rating but correlations are low</p>	<p>Correlation with an instrument measuring the same construct <math>\geq 0.50</math> OR at least 75% of the results are in accordance with the hypotheses AND correlation with related constructs is higher than with unrelated constructs</p>	<p>Solely correlations determined with unrelated constructs</p>	<p>Correlation with an instrument measuring the same construct <math>&lt; 0.50</math> OR <math>&lt; 75\%</math> of the results are in accordance with the hypotheses OR correlation with related constructs is lower than with unrelated constructs</p>
<p>Criterion/Predictive validity</p> <p>NOT TESTED</p>	<p>Convincing arguments that gold standard is "gold" AND correlation with gold standard <math>\geq 0.70</math></p>	<p>No convincing arguments that gold standard is "gold" OR doubtful design or method</p>	<p>Correlation with gold standard <math>&lt; 0.70</math>, despite adequate design and method</p>
<p>Responsiveness</p> <p>NOT TESTED</p>	<p>Correlation with an Instrument measuring the same construct <math>\geq 0.50</math> OR at least 75% of the results are in accordance with the hypotheses OR AUC <math>\geq 0.70</math> AND correlation with related constructs is higher than with unrelated constructs</p>	<p>Solely correlations determined with unrelated constructs</p>	<p><math>= &lt; 75\%</math> of the results are in accordance with the hypotheses OR AUC <math>&lt; 0.70</math> OR correlation with related constructs is lower than with unrelated constructs</p>

COMMENTS: