| **First Author’s Last Name, Year**  **Risk of Bias** | **Tool** | **Period of Time between Risk Prediction Measurement and BMD Measurement (Specify Unit of Time)** | **AUC (95% CI)** | **Sensitivity** | **Specificity (95% CI)** |
| --- | --- | --- | --- | --- | --- |
| Cadarette, 200182  Low | ABONE | NR  Likely < 2 years | AUROC with respect to DXA outcome ofT score=< -2.5 at femoral neck  ABONE: 0.72 (0.02) | ABONE >=2: 83.3 (78.5-88.0) | ABONE >=2: 47.7 (45.6-49.8) |
| Chan, 200686  unclear | ABONE | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | ABONE>=3: 0.70 (0.63-0.78) | ABONE >=3: 81.8% (NR) | ABONE >=3: 55.9% (NR) |
| D’Amelio, 200588  Low | AMMEB | NR | AMMEB>=10: 0.71 (NR) | NR | NR |
| D’Amelio, 201389  Low | AMMEB | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | AMMEB>=10:0.63 (NR) | NR | NR |
| Nguyen, 2004103  Low | DOESCore | Concurrent | DOEScore for T score<-2.5: 0.75 (SE 0.03) | DOEScore >10 : 82% (NR) | DOEScore >10: 52% (NR) |
| Jimenez-Nunez, 201394  Low | FRAX: Hip | None | FRAX Hip: 0.82 (NR) | Threshold NR for sensitivity | Threshold NR for specificity |
| Pang, 2014106  Low | FRAX: Hip without BMD (>3%) | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | Based on lowest BMD at any site (FN, Total Hip, LS)  FRAX: 0.70 (0.64-0.75) | Based on lowest BMD at any site, FRAX Score >3%  92.2 | Based on lowest BMD at any site, FRAX Score >3%  37.1 |
| Jimenez-Nunez, 201394  Low | FRAX: MOF | None | FRAX MOF: 0.82 (NR) | Threshold NR for sensitivity | Threshold NR for specificity |
| Pang, 2014106  Low | FRAX: MOF FRAX without BMD (>6.5%) | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | Based on lowest BMD at any site  FRAX: 0.68 (0.63-0.74) | Based on lowest BMD at any site, FRAX Score >6.5%  89.6 | Based on lowest BMD at any site, FRAX Score >6.5%  35.0 |
| Leslie, 2013113  Low | FRAX: MOF without BMD | NR | FRAX AUROC for T score<=-2.5: 0.67 (0.66-0.68) | NR | NR |
| Bansal, 201556  Fair | FRAX: MOF without BMD (>=9.3%) | NR | FRAX MOF risk >=9.3%: 0.58 (NR) | FRAX MOF risk ≥9.3%: 37  FRAX MOF risk ≥5.5%: 80.4 | FRAX MOF risk ≥9.3%: 74  FRAX MOF risk ≥5.5%: 26.8 |
| Cass, 2016114  Low | FRAX: MOF without BMD (>=9.3%) | NR | FRAX AUROC with respect to DXA outcome of T score=<-2.5 at total hip: 0.79 (0.74-0.84) | FRAX MOF risk >=9.3%: 0.39 (0.27-0.51) | FRAX MOF risk >=9.3%: 0.89 (0.87-0.91) |
| Crandall, 201457  Low | FRAX: MOF without BMD (>=9.3%) | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | FRAX MOF risk >=9.3%: 0.60 (0.56-0.63) | FRAX MOF risk >=9.3%: 33.3 (26.3-40.4) | FRAX MOF risk >=9.3%: 86.4 (85.1-87.7) |
| Gnudi, 200591  Low | Gnudi et al clinical prediction tool | NR | Compared to T score <=-2.5 either FN or LS  Gnudi et al clinical prediction tool: 0.744 (SE 0.023) | Cutoffs based on predicted probablity to have low BMD (PPL-BMD)  (1) PPL-BMD = 0.090  (2) PPL-BMD = 0.132  (3) PPL-BMD = 0.156  Gnudi et al clinical prediction tool:  (1)97.2%  (2) 95.5%  (3) 91.6% | Cutoffs based on predicted probablity to have low BMD (PPL-BMD)  (1) PPL-BMD = 0.090  (2) PPL-BMD = 0.132  (3) PPL-BMD = 0.156  Gnudi et al clinical prediction tool:  (1) 16.9%  (2) 27.7%  (3) 31.0% |
| Cass, 201385  Low | MORES | Concurrent | MORES>=6: 0.82 (0.71-0.92) | MORES>=6: 0.80 (0.52-0.96) | MORES>=6: 0.70 (0.64-0.74) |
| Shepherd, 2007110; Cass, 2016114  Low | MORES | NR | AUROC for MORES with respect to DXA outcome ofT score=< -2.5 at total hip 0.842: 0.842 (0.811-0.873) (reported as 0.87 in Cass, 2016114) | MORES >= 6: 0.95 (0.81-0.99) | MORES >= 6: 0.61 (0.57-0.64) |
| Shepherd, 2010115  Low | MORES | NR | MORES>=6 at any site: 0.73 (NR)  MORES>=6 at lumbar spine: 0.66 (NR) | MORES >=6 at any site: 0.66 (95% CI, 0.58 to 0.72)  MORES>=6 at lumbar spine: 0.58 (95% CI, 0.46 to 0.69) | MORES >=6 at any site: 0.68 (95% CI, 0.65 to 0.70)  MORES>=6 at lumbar spine: 0.65 (95% CI, 0.63 to 0.68) |
| Lynn, 200897  Low | MOST | NR | MOST  US  Lumbar spine (SE): 0.782 (0.019)  Total hip:0.889 (0.016)  Femoral neck:0.808 (0.014)  Any site: 0.799 (0.012)  Hong Kong  Lumbar spine (SE): 0.814 (0.016)  Total hip:0.892 (0.016)  Femoral neck:0.876 (0.018)  Any site:0.831 (0.014) | NR | NR |
| Zimering, 2007112  Unclear | MSCORE | NR | MSCORE: 0.84 (0.74-0.95) | MSCORE >9: 88 | MSCORE>9: 57 |
| Cadarette, 200182  Low | NOF | NR  Likely < 2 years | AUROC with respect to DXA outcome ofT score=<-2.5 at femoral neck  NOF: 0.70 (0.02) | NOF Cutoff Score >=1 risk factor: 96.2 (93.8-98.6) | NOF Cutoff Score >=1 risk factor: 17.8 (16.2-19.4) |
| D’Amelio, 200588  Low | NOF | NR | NOF>=1 :0.60 (NR) | NR | NR |
| D’Amelio, 201389  Low | NOF | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | NOF>=1: 0.60 (NR) | NR | NR |
| Mauck, 2005100  Low | NOF | Concurrent | Unadjusted analysis for NOF  Overall: 0.70 (0.63-0.77)  Age 45-64: 0.69 (0.51-0.70)  Age >=65: 0.60 (0.51-0.70) | NOF>=1 risk factor  Overall: 100% (95% CI, 95% to 100%)  Age 45-64: 100% (95% CI, 72 to 100%)  Age 65+: 100% (95% CI, 94% to 100%) | NOF>=1 risk factor  NOF Overall: 10% (95% CI, 5% to 16%)  Age 45-64: 19% (95% CI, 11% to 31%)  Age 65+: 0% (95% CI, 0% to 6%) |
| Cadarette, 200182  Low | ORAI | NR  Likely < 2 years | AUROC with respect to DXA outcome ofT score=<-2.5 at femoral neck  ORAI: 0.79 (0.01) | ORAI>=9: 97.5 (95.5-99.5) | ORAI>=9: 27.8 (25.9-29.7) |
| Cadarette, 200483  Low | ORAI | Unknown | AUROC with respect to DXA outcome ofT score=<-2.5 by lowest value at femoral neck or lumbar spine  ORAI: 0.802 (SE 0.02) | ORAI>8: 92.5 (85.6-96.7) | ORAI>8: 38.7 (34.5-42.9) |
| Cass, 200684  Low | ORAI | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | ORAI>=9: 0.74 (0.63-0.84) | ORAI>=9: 0.68 (0.49-0.88) | ORAI>=9: 0.66 (0.59-0.73) |
| Chan, 200686  unclear | ORAI | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | AUC for ORAI value >=9: NR  ORAI value >=20: 0.76 (0.68-0.84) | ORAI value >=9: 100% (NR) | ORAI value >=9: 9.8% (NR) |
| Cook et al, 200587  unclear | ORAI | None | ORAI: 0.664 (95% CI, 0.739 to 0.595) | ORAI<14: 0.43 | ORAI<14: 0.86 |
| D’Amelio, 200588  Low | ORAI | NR | ORAI>8:0.32 (NR) | NR | NR |
| D’Amelio, 201389  Low | ORAI | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | ORAI >8: 0.68 (NR) | NR | NR |
| Geusens, 200290  Unclear | ORAI | NR | NR | ORAI >8: 90%(95% CI, 85% to 95%) | ORAI >8: 52% (95% CI, 49% to 55%) |
| Gourlay, 200579  unclear | ORAI | NR | Reported by age groups:  Age 45-64  ORAI 0.75 (95% CI, 0.71 to 0.79)  Age 65+  ORAI 0.75 (95% CI, 0.71 to 0.78) | Reported by age groups:  Age 45-64  ORAI (Higher Risk >=8)  Age 65+  ORAI (Higher Risk >=13) 89.2 (95% CI, 84.6 to 92.8) | Reported by age groups:  Age 45-65  ORAI (Higher Risk >=8)  46.2 (95% CI, 44.2 to 48.2)  Age 65+  ORAI (Higher Risk >=13)  44.7 (95% CI, 42.0 to 47.5) |
| Gourlay, 200892  Unclear | ORAI | NR | ORAI >=9 for lowest site (FN or LS): 0.70 (95% CI, 0.69 to 0.71) | NR for T score<=-2.5 | NR for T score<=-2.5 |
| Harrison et al, 200693  Low | ORAI | NR | ORAI: 0.67 (NR) | NR | NR |
| Jimenez-Nunez, 201394  Low | ORAI | None | ORAI: 0.684 (NR) | ORAI>=9: 78 | ORAI>=9: 52 |
| Martinez-Aguila, 200799  Unclear | ORAI | NR, but study was done restrospectively so assumption is clinical risks were collected at the time of the BMD measurement. | ORAI>=9 for T-score < –2.5: 0.62 (95% CI 0.56 to 0.67) | ORAI>=9: 64.1 (95% CI 54.7 to 72.7) | ORAI>=9: 58.9 (95% CI 54.7 to 63.1) |
| Mauck, 2005100  Low | ORAI | Concurrent | Unadjusted analyses for ORAI  Overall: 0.84 (0.78-0.89)  Age 45-64: 0.82 (0.71-0.94)  Age >=65: 0.79 (0.71-0.87) | ORAI >=9  Overall: 99% (95% CI, 92% to 100%)  Age 45-64: 91% (95% CI, 59% to 100%)  Age 65+: 100% (95 % CI, 94% to 100%) | ORAI >=9  Overall: 36% (95% CI, 28% to 44%)  Age 45-64: 69% (95% CI, 57% to 80%)  Age 65+: 0% (95 % CI, 0% to 6%) |
| Nguyen, 2004103  Low | ORAI | Concurrent | NR | ORAI >15: 61% (NR) | ORAI >15: 68% (NR) |
| Richy, 200480  Unclear | ORAI | NR | ORAI  Total hip: 74.1 (NR)  Femoral neck: 70.6 (NR)  Lumbar spine: 64.4 (NR)  Any site: 67 (NR) | ORAI>=8  Total hip: 90  Femoral neck: 82  Lumbar spine: 76  Any site: 76 | ORAI<8  Total hip: 43  Femoral neck: 45  Lumbar spine: 45  Any site: 48 |
| Rud, 2005109  Low | ORAI | NR | AUROC for ORAI with respect to DXA outcome ofT score=<-2.5 for any of three sites: femoral neck, total hip, lumbar spine: 0.64 (0.58–0.70) | 1) a priori cut off based on developers cutoffs and DXA outcome of T score FN=< -2.5  2) cutoff based on ROC analysis to yield Sn close to 90% and DXA outcome lowest T score of FN, TH, LS=< -2.5  ORAI  1) cutoff>8: 50 (44–56)(<-2.0)  2) cutoff>2: 81 (76–8 | ORAI  1) cutoff>8: 75 (73–77)(<-2.0)  2) cutoff>2: 39 (37–41)(<-2.0)  3) cutoff>2: 37 (35–39)(<-2.5) |
| Cook et al, 200587  unclear | OSIRIS | None | OSIRIS: 0.747 (95% CI, 0.805 to 0.702) | OSIRIS<0: 70 | OSIRIS<0: 73 |
| Harrison et al, 200693  Low | OSIRIS | NR | OSIRIS: 0.70 (NR) | NR | NR |
| Jimenez-Nunez, 201394  Low | OSIRIS | None | OSIRIS: 0.711 (NR) | OSIRIS<=-3: 81 | OSIRIS<=-3: 54 |
| Martinez-Aguila, 200799  Unclear | OSIRIS | NR, but study was done restrospectively so assumption is clinical risks were collected at the time of the BMD measurement. | OSIRIS<=1 for T-score < –2.5: 0.63 (95% CI, 0.57 to 0.69) | OSIRIS<=1: 58.1 (95% CI, 48.6 to 67.2) | OSIRIS<=1: 67.9 (95% CI, 63.8 to 71.8) |
| Richy, 200480  Unclear | OSIRIS | NR | OSIRIS  Total hip: 81.7 (NR)  Femoral neck: 77.2 (NR)  Lumbar spine: 69 (NR)  Any site: 73 (NR) | OSIRIS<1  Total hip: 84  Femoral neck: 75  Lumbar spine: 63  Any site: 64 | OSIRIS>=1  Total hip: 63  Femoral neck: 66  Lumbar spine: 65  Any site: 69 |
| Adler, 200377  Low | OST | 1 month | AUROC with respect to DXA outcome ofT score=<-2.5 for any of three sites femoral neck, total hip, lumbar spine  OST<2  Lumbar spine  0.845 (0.731-0.960)  Femoral Neck  0.814 (0.717-0.910)  Total Hip  0.866 (0.768-0.963)  Any site  0.836 (0.747-0.924) | Cutoff used by study authors (OST<3)  93%  Cutoff used for older men (ref 10),(OST<2)  82%  Cutoff used for white women (ref 6),(OST<1)  75%  All compared to DXA outcome of any T score (LS, FN, TH) < -2.5 | Cutoff used by study authors(OST<3)  66%  Cutoff used for older men (ref 10),(OST<2)  74%  Cutoff used for white women (ref 6),(OST<1)  80%  All compared to DXA outcome of any T score (LS, FN, TH) =< -2.5 |
| Cadarette, 200483  Low | OST | Unknown | AUROC with respect to DXA outcome ofT score=<-2.5 by lowest value at femoral neck or lumbar spine  OST: 0.733 (SE 0.02) | OST<2: 95.3 (89.3-98.5) | OST<2: 39.6 (35.4-43.9) |
| Cook et al, 200587  unclear | OST | None | OST: 0.716 (95% CI, 0.775 to 0.669) | OST<=-1: 52 | OST<=-1: 82 |
| Crandall, 201457  Low | OST | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | OST<2: 0.75 (0.72-0.78) | OST<2: 79.3 (73.2-85.4) | OST<2: 70.1 (68.4-71.8) |
| D’Amelio, 200588  Low | OST | NR | OST<2: 0.33 (CI NR) | NR | NR |
| D’Amelio, 201389  Low | OST | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | OST<2: 0.32 (NR) | NR | NR |
| Geusens, 200290  Unclear | OST | NR | NR | OST <2: 88% (95% CI, 83% to 93%) | OST <2: 52% (95% CI, 49% to 55%) |
| Gourlay, 200579  Unclear/ | OST | NR | Reported by age groups:  Age 45-64  OST 0.77 (95% CI, 0.73 to 0.81)  Age 65+  OST 0.76 (0.73 to 0.79) | Reported by age groups:  Age 45-64  OST (Higher Risk <=1) 89.2 (95%CI, 82.8 to 93.8)  88.5 (95% CI, 82.0 to 93.3)  Age 65+  OST (Higher Risk <=-1) 84.6 (95%CI, 79.5 to 89.0) | Reported by age groups:  Age 45-64  OST (Higher Risk <=1) 45.0 (95%CI, 43.0 to 47.0)  Age 65+  OST (Higher Risk <=-1) 47.5 (95%CI, 44.7 to 50.3) |
| Gourlay, 200892  Unclear | OST | NR | OST <=-1  0.76 (95% CI, 0.74 to 0.77) for FN site  0.72 (95 %CI, 0.71 to 0.73) for lowest site (FN or LS) | OST <=-1: 85% (95% CI, 83% to 87%) | OST <=-1: 48% (inferred from 1-Specificity) |
| Harrison et al, 200693  Low | OST | NR | OST: 0.69 (NR) | NR | NR |
| Jimenez-Nunez, 201394  Low | OST | None | OST: 0.71 (NR) | OST<=-1: 83 | OST<=-1: 52 |
| Leslie, 2013113  Low | OST | NR | OST AUROC for T score<=-2.5: 0.72 (0.71-0.73) | NR | NR |
| Lynn, 200897  Low | OST | NR | OST  US  Lumbar spine (SE): 0.662 (0.022)  Total hip: 0.823 (0.020)  Femoral neck: 0.740 (0.016)  Any site: 0.714 (0.014)  Hong Kong  Lumbar spine (SE): 0.717 (0.018)  Total hip:0.855 (0.018)  Femoral neck: 0.849 (0.019)  Any site:0.759 (0.016) | OST <287.6% | OST <2 36.1% |
| Machado, 201098  Low | OST | NR | OST <2: 0.63 (95% CI, 0.52 to 0.73) | OST <2: 61.8% (NR) | OST < 2: 63.7% (NR) |
| Martinez-Aguila, 200799  Unclear | OST | NR, but study was done restrospectively so assumption is clinical risks were collected at the time of the BMD measurement. | OST <=1 for T-score < –2.5: 0.64 (95% CI 0.59 to 0.69) | OST <2: 69.2 (95% CI 60.0 to 77.4) | OST <2: 58.8 (95% CI 54.5 to 62.9) |
| McLeod, 2015101  Low | OST | 3 weeks | OST  Femoral neck: 0.807 (95% CI, 0.692 to 0.985)  Lumbar spine: 0.706 (95% CI, 0.559 to 0.852) | OST cutoff of <2, for diagnosing using femoral neck sites: 87.5  OST cutoff of <2, for diagnosing using lumbar spine sites: 78.6 | OST cutoff of <2, for diagnosing using femoral neck sites:62.7  OST cutoff of <2, for diagnosing using lumbar spine sites:63.7 |
| Morin, 2009102  Unclear | OST | NR | OST  Using lowest T score from femoral neck  0.77 (95% CI, 0.75 to 0.79)  Using T score from any site:  0.71 (95% CI, 0.69 to 0.72) | OST<=1:  Using lowest T score from any site:  46.8% (95% CI, 45.7 to 47.9)  Using FN T Score:  60.2% (95% CI, 59.2% to 61.3%) | OST<=1:  Using lowest T score from any site:  81.1% (95% CI, 80.3% to 82.0%)  Using FN T score:  78.8 (95% CI, 77.9% to 79.6%) |
| Pang, 2014106  Low | OST | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | Based on lowest BMD at any site  OST threshold of 0 (not clear if this means <=0 or <0)  0.76 (0.71-0.82) | Based on lowest BMD at any site (OST Threshold = 0: not clear if this means <=0 or <0)  90.9 | Based on lowest BMD at any site (OST Threshold = 0: not clear if this means <=0 or <0)  39.9 |
| Richards, 2014108  Unclear | OST | NR | OST: 0.67 (NR) | OST≤-6: 82.6%  OST <=0: 40.2% | OST>-6: 33.6%  OST <=0: 85.4% |
| Richy, 200480  Unclear | OST | NR | OST <2  Total hip: 81.3 (NR)  Femoral neck: 76.8 (NR)  Lumbar spine: 68.6 (NR)  Any site: 72.6 (NR) | OST<2  Total hip: 97  Femoral neck: 92  Lumbar spine: 85  Any site: 86 | OST<2  Total hip:34  Femoral neck: 37  Lumbar spine: 37  Any site: 40 |
| Rud, 2005109  Low | OST | NR | AUROC for OST with respect to DXA outcome ofT score=<-2.5 for any of three sites: femoral neck, total hip, lumbar spine: 0.68 (0.63–0.74) | 1) a priori cut off based on developers cutoffs and DXA outcome of T score FN=< -2.5  2) cutoff based on ROC analysis to yield Sn close to 90% and DXA outcome lowest T score of FN, TH, LS=< -2.5  OST  1) cutoff <2: 92 (64–100) (<-2.5)  2) cutoff<5: 92 (89–9 | OST  1) cutoff <2: 71 (69–73)(<-2.5)  2) cutoff<5: 24 (22–26)(<-2.0)  3) cutoff<5: 23 (21–25)(<-2.5) |
| Sinnott, 2006111  Low | OST | NR | OST: 0.89 (0.75–1.03) | OST<4: 89  OST<2: 89% | OST<4: 54  OST<2: 71% |
| Zimering, 2007112  Unclear | OST | NR | OST: 0.81 (0.70-0.92) | OST<2 (cutoff established in elderly male population): 75  OST <3 (cutoff established in male veteran popualation): 75 | OST<2 (cutoff established in elderly male population): 68  OST<3 (cutoff established in male veteran popualation): 59 |
| Chan, 200686  unclear | OSTA | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | OSTA<=-2: 0.82 (0.75-0.90) | OSTA<= -1: 97% | OSTA<= -1:43.1% |
| Kung, 200395  Low | OSTA | NR | OSTA  femoral neck: 0.80 (95% CI 0.78–0.84)  femoral neck or lumbar spine: 0.75 (95% CI 0.72–0.79) | OSTA<=-1  Femoral neck: 88%  Femoral neck or lumbar spine:79% | OSTA<=-1  Femoral neck: 54%  Femoral neck or lumbar spine: 60% |
| Kung, 200596  Low | OSTA | NR | OSTA  femoral neck: 0.85 (95% CI 0.80–0.89)  lumbar spine: 0.79 (95% CI 0.74–0.83)  femoral neck or lumbar spine: 0.78 (95% CI 0.73–0.82) | OSTA<=-1  Femoral neck: 83%  Lumbar spine: 72%  Femoral neck or lumbar spine:71% | OSTA<=-1  Femoral neck: 67%  Lumbar spine: 65%  Femoral neck or lumbar spine: 68% |
| Machado, 201098  Low | OSTA | NR | OSTA <2: 0.62 (95% CI, 0.51 to 0.72) | OSTA <2: 55.9% (NR) | OSTA <2: 67.9% (NR) |
| Nguyen, 2004103  Low | OSTA | Concurrent | NR | OSTA <-1: 41% (NR)FN | OSTA <-1: 24% (NR) FN |
| Oh, 2013104  Low | OSTA | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | OSTA <=-1 for T score<=-2.5 at femoral neck or lumbar spine NR  OSTA <=0 for T score<=-2.5 at femoral neck or lumbar spine  0.617 (SE 0.11) | OSTA=<-1 for T score<=-2.5 at femoral neck or lumbar spine  76.1 (71.0-80.8)  OSTA= <0 for T score<=-2.5 at femoral neck or lumbar spine  94.2 (91.0-96.5) | OSTA=<-1 for T score<=-2.5 at femoral neck or lumbar spine  67.1 (63.6-70.5) |
| Oh, 2016105  Low | OSTA | NR | OSTA<=1: 0.627 (SE 0.016)  OSTA<= 0: 0.665 (SE 0.021) | OSTA<=1: 92.3 (95% CI, 84.8 to 96.9)  OSTA<=0: 84.6 (95% CI, 75.5 to 91.3) | OSTA<=1: 33.2 (95% CI, 30.3 to 36.2)  OSTA<=0: 48.4 (95% CI, 45.3 to 51.5) |
| Park, 2003107  Unclear | OSTA | NR | OSTA: 0.873 (NR) | OSTA≤-1: 87% | OSTA>=<-1: 67% |
| Zimering, 2007112  Unclear | Reduced MSCORE (age and weight-variable specific scores) | NR | Reduced MSCORE: 0.81 (0.69-0.92) | Reduced MSCORE>9: 85 | Reduced MSCORE>9: 58 |
| Ben Sedrine, 200178  Low | SCORE | NR | SCORE AUC (SE)with respect to DXA Tscore < -2.5 at each of the following sites:  Femoral neck0.75 (0.010)  Total hip0.78 (0.012)  Lumbar spine 0.66 (0.010)  Any site0.71 (0.009)  Hip (total or neck) or spine0.74 (0.012)  All sites 0.78 (0.015) | SCORE >=6, T<-2.5  Total hip98.2  Femoral neck 96.9  Lumbar spine 93.5  Any site93.9  Hip (total or neck) or spine 98.1  All sites 98.0  study cutoff >=8, T<-2.5  Total hip93.7  Femoral neck 88.4  Lumbar spine 81.0  Any site82.4  Hip (total or neck) or spine | SCORE>=6, T<-2.5  Total hip19.7  Femoral neck 21.4  Lumbar spine 21.7  Any site23.7  Hip (total or neck) or spine 20.1  All sites 19.0  study cutoff >=8, T<-2.5  Total hip37.3  Femoral neck 39.5  Lumbar spine 39.3  Any site42.4  Hip (total or neck) or spine |
| Brenneman, 200381  Low | SCORE | Concurrent | AUROC with respect to DXA outcome ofT score=<-2.5 for total hip or lumbar spine  SCORE: 0.73 (SE 0.03) | SCORE>=7: 93.7 (88.3, 99.1) | SCORE>=7: 23.8 (9.6, 38.0) |
| Cadarette, 200182  Low | SCORE | NR  Likely < 2 years | AUROC with respect to DXA outcome ofT score=<-2.5 at femoral neck  SCORE: 0.80 (0.01) | SCORE>=6: 99.6 (98.8-100) | SCORE>=6: 17.9 (16.2-19.5) |
| Cass, 200684  Low | SCORE | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | SCORE>=6: 0.67 (0.54-0.79) | SCORE>=6: 0.54 (0.34-0.75) | SCORE>=6: 0.72 (0.65-0.78) |
| Chan, 200686  unclear | SCORE | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | SCORE: 0.80 (0.72-0.87) | SCORE>=6: 100% | SCORE>=6: 30.4% |
| Cook et al, 200587  Unclear | SCORE | None | SCORE: 0.720, (95% CI, 0.674 to 0.779) | SCORE<12: 0.5 | SCORE<12: 0.83 |
| Crandall, 201457  Low | SCORE | Not specifically indicated but appears to have been done shortly after enrollment since subjects were enrolled prospectively. | SCORE >7: 0.72 (0.69-0.76) | SCORE >7: 74.1 (67.6-80.7) | SCORE >7: 70.8 (69.1-72.5) |
| Gourlay, 200579  unclear | SCORE | NR | Reported by age groups:  Age 45-64  SCORE 0.76 (95% CI, 0.72 to 0.80)  Age 65+  SCORE 0.75 (95% CI 0.71 to 0.78) | Reported by age groups:  Age 45-65  SCORE (Higher Risk >=7) 88.5 (95% CI, 82.0 to 93.3)  Age 65+  SCORE (Higher Risk >=11) 88.8 (95% CI, 84.1 to 92.5) | Reported by age groups:  Age 45-66  SCORE (Higher Risk >=7) 39.8 (95% CI, 37.8 to 41.7)  Age 65+  SCORE (Higher Risk >=11) 42.3 (95% CI, 39.6 to 45.1) |
| Gourlay, 200892  Unclear | SCORE | NR | SCORE >=6  0.71 (95% CI, 0.70 to 0.72) for lowest site (FN or LS) | NR for T score<=-2.5 | NR for T score<=-2.5 |
| Harrison et al, 200693  Low | SCORE | NR | SCORE: 0.67 (NR) | NR | NR |
| Jimenez-Nunez, 201394  Low | SCORE | None | SCORE: 0.672 (NR) | SCORE>=6: 68 | SCORE>=6: 60 |
| Mauck, 2005100  Low | SCORE | Concurrent | Unadjusted analyses  SCORE  Overall: 0.87 (0.81-0.92)  Age 45-64: 0.85 (0.72-0.99)  Age >=65: 0.80 (0.72-0.88) | SCORE>=6  Overall: 100% (95% CI, 95%to 100%)  Age 45-64 : 100% (95% CI, 72% to 100%)  Age 65+: 100% (95% CI, 94% to 100%) | SCORE>=6  Overall: 25% (95% CI, 18% to 33%)  Age 45-64 :41% (95% CI, 29% to 54%)  Age 65+: 8% (95% CI, 3% to 17%) |
| Richy, 200480  Unclear | SCORE | NR | SCORE  Total hip: 78.5 (NR)  Femoral neck: 74.9 (NR)  Lumbar spine: 66.6 (NR)  Any site: 70.8 (NR) | SCORE >=7  Total hip: 94  Femoral neck: 88  Lumbar spine: 81  Any site: 86 | SCORE<7  Total hip: 37  Femoral neck: 40  Lumbar spine: 39  Any site: 40 |
| Rud, 2005109  Low | SCORE | NR | AUROC for SCORE with respect to DXA outcome ofT score=<-2.5 for any of three sites: femoral neck, total hip, lumbar spine: 0.68 (0.63–0.73) | 1) a priori cut off based on developers cutoffs and DXA outcome of T score FN=< -2.5  2) cutoff based on ROC analysis to yield Sn close to 90% and DXA outcome lowest T score of FN, TH, LS=< -2.5  SCORE  1) n/a (wrong DXA threshold)  2) cutoff>3: 90 (86–93) | 1) a priori cut off based on developers cutoffs and DXA outcome of T score FN=< -2.5  2) cutoff based on ROC analysis to yield Sn close to 90% and DXA outcome lowest T score of FN, TH, LS=< -2.5  SCORE  1) n/a (wrong DXA threshold)  2) cutoff>3: 28 (25–29)( |
| Brenneman, 200381  Low | SOF | Concurrent | AUROC with respect to DXA outcome ofT score=<-2.5 for total hip or lumbar spine  SOF: 0.54 (SE 0.03) | SOF>= 5: 32.6 (26.6, 38.6) | SOF>= 5: 76.0 (63.5, 88.6) |
| Cook et al, 200587  unclear | SOFSURF | None | SOFSURF: 0.717 (95% CI, 0.777 to 0.670) | SOFSURF<1  0.72 | SOFSURF<1  0.67 |
| Geusens, 200290  Unclear | SOFSURF | NR | NR | SOFSURF >=-1: 92% (95% CI, 88% to 96%) | SOFSURF >=-1: 37% (95% CI, 34% to 40%) |
| Nguyen, 2004103  Low | SOFSURF | Concurrent | NR | SOFSURF >1.7 : 78% (NR) | SOFSURF >10 : 36% (NR) |

**Abbreviations:** AA=African American; ABONE=assessing age, body size, and estrogen use; AMMEB=Age, Years after Menopause, Age at Menarche, Body Mass Index; BMD=bone mineral density; CaMOS=Canadian Multicentre Osteoporosis Study; COPD=chronic obstructive pulmonary disease; DOEScore=Dubbo Osteoporosis Epidemiology Score; DXA=dual energy x-ray absorptiometry; FRAX=Fracture Risk Assessment tool; GP=general practitioner; h/o=history of; HRT=hormone replacement therapy; kg=kilogram; KNHANES=Korean National Health and Nutrition Examination Survey; MORE=Multiple Outcomes of Raloxifene Trial; MOST=Male Osteoporosis Screening Tool; MSCORE=male, simple calculated osteoporosis risk estimation; NA=not applicable; NR=not reported; NOF=National Osteoporosis Foundation; OPRA=Osteoporosis Population-based Risk Assessment;ORAI=Osteoporosis Risk Assessment Instrument; OSIRIS=Osteoporosis Index of Risk; OST=osteoporosis self-assessment tool; QUI=ultrasound index; QUS=quantitative ultrasound; RA=rheumatoid arthritis; SCORE=Simple Calculated Osteoporosis Risk Estimation Tool; SD=standard deviation; SOF=Study of Osteoporotic Fractures; SOFSURF=Study of Osteoporotic Fractures Simple Useful Risk Factors; TH=total hip; US=United States; USPSTF=United States Preventative Services Task Force; WHI=Women’s Health Initiative.