

Advancing Oncology Research with Thermo Scientific™ Mass Spectrometry

Research publications

Breast cancer

[Comparative profiling by data-independent acquisition mass spectrometry reveals featured plasma proteins in breast cancer: a pilot study](#)

Yoon KH, Chu H, Kim H, Huh S, Kim EK, Kang UB, Shin HC.
Ann Surg Treat Res. 2024 Apr;**106(4)**:195-202.

[Spindle apparatus coiled-coil protein 1 \(SPDL1\) serves as a novel prognostic biomarker in triple-negative breast cancer](#)

Yang XY, Zheng XX, Zhai XJ, Tang T, Yu SC.
Front Pharmacol. 2023 Nov 27;**14**:1243505

[Integrative analysis of plasma metabolomics and proteomics reveals the metabolic landscape of breast cancer](#)

An R, Yu H, Wang Y, Lu J, Gao Y, Xie X, Zhang J.
Cancer Metab. 2022 Aug 17;**10(1)**:13.

[Plasma Proteome Signature to Predict the Outcome of Breast Cancer Patients Receiving Neoadjuvant Chemotherapy](#)

Gwark S, Ahn HS, Yeom J, Yu J, Oh Y, Jeong JH, Ahn JH, Jung KH, Kim SB, Lee HJ, Gong G, Lee SB, Chung IY, Kim HJ, Ko BS, Lee JW, Son BH, Ahn SH, Kim K, Kim J.
Cancers (Basel). 2021 Dec 14;**13(24)**:6267.

[High-throughput proteomics of breast cancer interstitial fluid: identification of tumor subtype-specific serologically relevant biomarkers](#)

Terkelsen T, Pernemalm M, Gromov P, Børresen-Dale AL, Krogh A, Haakensen VD, Lethiö J, Papaleo E, Gromova I.
Mol Oncol. 2021 Feb;**15(2)**:429-461

Gastrointestinal cancer

[Novel serum protein biomarker panel for early diagnosis of pancreatic cancer](#)

Byeon S, McKay MJ, Molloy MP, Gill AJ, Samra JS, Mittal A, Sahni S.
Int J Cancer. 2024 Jul 15;**155(2)**:365-371.

[A Large-Scale Proteomics Resource of Circulating Extracellular Vesicles for Biomarker Discovery in Pancreatic Cancer](#)

Bockorny B, Muthuswamy L, Huang L, Hadisurya M, Lim CM, Tsai LL, Gill RR, Wei JL, Bullock AJ, Grossman JE, Besaw RJ, Narasimhan S, Tao WA, Perea S, Sawhney MS, Freedman SD, Hidalgo M, Iliuk A, Muthuswamy SK.
medRxiv [Preprint]. 2024 Jul 19:2023.03.13.23287216.

[A proteomic classifier panel for early screening of colorectal cancer: a case control study](#)

Hua H, Wang T, Pan L, Du X, Xia T, Fa Z, Gu L, Gao F, Yu C, Gao F, Liao L, Shen Z.
Transl Med. 2024 Feb 21;**22(1)**:188.

[A metabolomic and proteomic study to elucidate the molecular mechanisms of immunotherapy resistance in patients with oesophageal squamous cell carcinoma](#)

Gao L, Chen Y.
Biomed Rep. 2023 Apr 6;**18(5)**:36.

[A large-scale targeted proteomics of plasma extracellular vesicles shows utility for prognosis prediction subtyping in colorectal cancer](#)

Kasahara K, Narumi R, Nagayama S, Masuda K, Esaki T, Obama K, Tomonaga T, Sakai Y, Shimizu Y, Adachi J.
Cancer Med. 2023 Mar;**12(6)**:7616-7626.

[A circulating extracellular vesicles-based novel screening tool for colorectal cancer revealed by shotgun and data-independent acquisition mass spectrometry](#)

Zheng X, Xu K, Zhou B, Chen T, Huang Y, Li Q, Wen F, Ge W, Wang J, Yu S, Sun L, Zhu L, Liu W, Gao H, Yue L, Cai X, Zhang Q, Ruan G, Zhu T, Wu Z, Zhu Y, Shao Y, Guo T, Zheng S.
Extracell Vesicles. 2020 Apr 14;**9(1)**:1750202.

[Plasma proteomics-based identification of novel biomarkers in early gastric cancer](#)

Zhou B, Zhou Z, Chen Y, Deng H, Cai Y, Rao X, Yin Y, Rong L.
Clin Biochem. 2020 Feb;**76**:5-10.

Ovarian cancer

[Quantification of putative ovarian cancer serum protein biomarkers using a multiplexed targeted mass spectrometry assay](#)

Ryu J, Boylan KLM, Twigg CAI, Evans R, Skubitz APN, Thomas SN.
Clin Proteomics. 2024 Jan 3;**21(1)**:1.

[Novel Diagnostic Biomarkers for High-Grade Serous Ovarian Cancer Uncovered by Data-Independent Acquisition Mass Spectrometry](#)

Huh S, Kang C, Park JE, Nam D, Kim SI, Seol A, Choi K, Hwang D, Yu MH, Chung HH, Lee SW, Kang UB.
J Proteome Res. 2022 Sep 2;**21(9)**:2146-2159

[Convergence of Plasma Metabolomics and Proteomics Analysis to Discover Signatures of High-Grade Serous Ovarian Cancer](#)

Ahn HS, Yeom J, Yu J, Kwon YI, Kim JH, Kim K.
Cancers (Basel). 2020 Nov 19;**12(11)**:3447.

Advancing oncology research with Thermo Scientific Mass Spectrometry

Research publications

Prostate cancer

[Novel serum proteomic biomarkers for early diagnosis and aggressive grade identification of prostate cancer](#)

Wang C, Liu G, Liu Y, Yang Z, Xin W, Wang M, Li Y, Yang L, Mu H, Zhou C.

Front Oncol. 2022 Oct 6;12:1004015.

[Unravelling the proteomic landscape of extracellular vesicles in prostate cancer by density-based fractionation of urine](#)

Dhondt B, Geeurickx E, Tulkens J, Van Deun J, Vergauwen G, Lippens L, Miinalainen I, Rappu P, Heino J, Ost P, Lumen N, De Wever O, Hendrix A. *J Extracell Vesicles.* 2020 Mar 11;9(1):1736935.

Lung cancer

[Plasma metabolomics for the assessment of the progression of non-small cell lung cancer](#)

Zhang Y, Cheng Y, Qin L, Liu Y, Huang S, Dai L, Tao J, Pan J, Su C, Zhang Y.

Int J Biol Markers. 2023 Mar;38(1):37-45.

[Serum proteomics profiling identifies a preliminary signature for the diagnosis of early-stage lung cancer](#)

Gasparri R, Noberini R, Cuomo A, Yadav A, Tricarico D, Salvetto C, Maisonneuve P, Caminiti V, Sedda G, Sabalic A, Bonaldi T, Spaggiari L.

Proteomics Clin Appl. 2023 Mar;17(2):e2200093.

[Discovery of efficacy biomarkers for non-small cell lung cancer with first-line anti-PD-1 immunotherapy by data-independent acquisition mass spectrometry](#)

Wang C, Liu G, Liu Y, Yang Z, Xin W, Wang M, Li Y, Yang L, Mu H, Zhou C.

Clin Exp Immunol. 2022 May 13;208(1):60-71.

[Identification of a Blood-Based Protein Biomarker Panel for Lung Cancer Detection](#)

El-Khoury V, Schritz A, Kim SY, Lesur A, Sertamo K, Bernardin F, Petritis K, Pirrotte P, Selinsky C, Whiteaker JR, Zhang H, Kennedy JJ, Lin C, Lee LW, Yan P, Tran NL, Inge LJ, Chalabi K, Decker G, Bjerkvig R, Paulovich AG, Berchem G, Kim YJ.

Cancers (Basel). 2020 Jun 19;12(6):1629.

Multi-cancer

[Biomarker Candidates for Tumors Identified from Deep-Profiled Plasma Stem Predominantly from the Low Abundant Area](#)

Tognetti M, Sklodowski K, Müller S, Kamber D, Muntel J, Bruderer R, Reiter L.

Proteome Res. 2022 Jul 1;21(7):1718-1735

Review articles

[Unveiling the potential of proteomic and genetic signatures for precision therapeutics in lung cancer management](#)

Srivastava S, Jayaswal N, Kumar S, Sharma PK, Behl T, Khalid A, Mohan S, Najmi A, Zoghebi K, Alhazmi HA.

Cell Signal. 2024 Jan;113:110932.

[Recent developments in mass-spectrometry-based targeted proteomics of clinical cancer biomarkers](#)

Wenk D, Zuo C, Kislinger T, Sepiashvili L.

Clin Proteomics. 2024 Jan 30;21(1):6.

[Frontiers in mass spectrometry-based clinical proteomics for cancer diagnosis and treatment](#)

Haga Y, Minegishi Y, Ueda K.

Cancer Sci. 2023 May;114(5):1783-1791.

[Mass Spectrometry-Based Proteomics Workflows in Cancer Research: The Relevance of Choosing the Right Steps](#)

Carrillo-Rodriguez P, Selheim F, Hernandez-Valladares M.

Cancers (Basel). 2023 Jan 16;15(2):555.

[Liquid chromatography-tandem mass spectrometry for clinical diagnostics](#)

Thomas SN, French D, Jannetto PJ, Rappold BA, Clarke WA.

Nat Rev Methods Primers. 2022;2(1):96.

[Data-independent acquisition mass spectrometry \(DIA-MS\) for proteomic applications in oncology](#)

Krasny L, Huang PH.

Mol Omics. 2021 Feb 1;17(1):29-42.

[Recent advances in mass spectrometry based clinical proteomics: applications to cancer research](#)

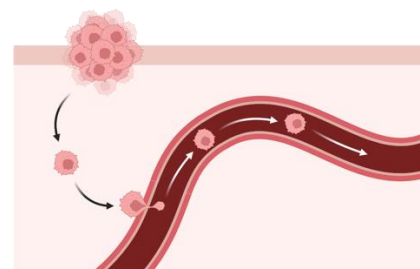
Macklin A, Khan S, Kislinger T.

Clin Proteomics. 2020 May 24;17:17.

[Mass spectrometry based proteomics and metabolomics in personalized oncology](#)

Kowalczyk T, Ciborowski M, Kisluk J, Kretowski A, Barbas C.

Biochim Biophys Acta Mol Basis Dis. 2020 May 1;1866(5):165690.



Advancing oncology research with Thermo Scientific Mass Spectrometry

Research publications

[Novel serum protein biomarker panel for early diagnosis of pancreatic cancer](#)

Byeon S, McKay MJ, Molloy MP, Gill AJ, Samra JS, Mittal A, Sahni S.
Int J Cancer. 2024 Jul 15;155(2):365-371.

[A Large-Scale Proteomics Resource of Circulating Extracellular Vesicles for Biomarker Discovery in Pancreatic Cancer](#)

Bockorny B, Muthuswamy L, Huang L, Hadisurya M, Lim CM, Tsai LL, Gill RR, Wei JL, Bullock AJ, Grossman JE, Besaw RJ, Narasimhan S, Tao WA, Perea S, Sawhney MS, Freedman SD, Hidalgo M, Iliuk A, Muthuswamy SK.
medRxiv [Preprint]. 2024 Jul 19:2023.03.13.23287216.

[Comparative profiling by data-independent acquisition mass spectrometry reveals featured plasma proteins in breast cancer: a pilot study](#)

Yoon KH, Chu H, Kim H, Huh S, Kim EK, Kang UB, Shin HC.
Ann Surg Treat Res. 2024 Apr;106(4):195-202.

[A proteomic classifier panel for early screening of colorectal cancer: a case control study](#)

Hua H, Wang T, Pan L, Du X, Xia T, Fa Z, Gu L, Gao F, Yu C, Gao F, Liao L, Shen Z.
Transl Med. 2024 Feb 21;22(1):188.

[Spindle apparatus coiled-coil protein 1 \(SPDL1\) serves as a novel prognostic biomarker in triple-negative breast cancer](#)

Yang XY, Zheng XX, Zhai XJ, Tang T, Yu SC.
Front Pharmacol. 2023 Nov 27;14:1243505

[A metabolomic and proteomic study to elucidate the molecular mechanisms of immunotherapy resistance in patients with oesophageal squamous cell carcinoma](#)

Gao L, Chen Y.
Biomed Rep. 2023 Apr 6;18(5):36.

[A large-scale targeted proteomics of plasma extracellular vesicles shows utility for prognosis prediction subtyping in colorectal cancer](#)

Kasahara K, Narumi R, Nagayama S, Masuda K, Esaki T, Obama K, Tomonaga T, Sakai Y, Shimizu Y, Adachi J.
Cancer Med. 2023 Mar;12(6):7616-7626.

[Novel serum proteomic biomarkers for early diagnosis and aggressive grade identification of prostate cancer](#)

Wang C, Liu G, Liu Y, Yang Z, Xin W, Wang M, Li Y, Yang L, Mu H, Zhou C.
Front Oncol. 2022 Oct 6;12:1004015.

[Novel Diagnostic Biomarkers for High-Grade Serous Ovarian Cancer Uncovered by Data-Independent Acquisition Mass Spectrometry](#)

Huh S, Kang C, Park JE, Nam D, Kim SI, Seol A, Choi K, Hwang D, Yu MH, Chung HH, Lee SW, Kang UB.
J Proteome Res. 2022 Sep 2;21(9):2146-2159

[Integrative analysis of plasma metabolomics and proteomics reveals the metabolic landscape of breast cancer](#)

An R, Yu H, Wang Y, Lu J, Gao Y, Xie X, Zhang J.
Cancer Metab. 2022 Aug 17;10(1):13.

[Biomarker Candidates for Tumors Identified from Deep-Profiled Plasma Stem Predominantly from the Low Abundant Area](#)

Tognetti M, Sklodowski K, Müller S, Kamber D, Muntel J, Bruderer R, Reiter L.
Proteome Res. 2022 Jul 1;21(7):1718-1735

[Discovery of efficacy biomarkers for non-small cell lung cancer with first-line anti-PD-1 immunotherapy by data-independent acquisition mass spectrometry](#)

Wang C, Liu G, Liu Y, Yang Z, Xin W, Wang M, Li Y, Yang L, Mu H, Zhou C.
Clin Exp Immunol. 2022 May 13;208(1):60-71.

[Plasma Proteome Signature to Predict the Outcome of Breast Cancer Patients Receiving Neoadjuvant Chemotherapy](#)

Gwak S, Ahn HS, Yeom J, Yu J, Oh Y, Jeong JH, Ahn JH, Jung KH, Kim SB, Lee HJ, Gong G, Lee SB, Chung IY, Kim HJ, Ko BS, Lee JW, Son BH, Ahn SH, Kim K, Kim J.
Cancers (Basel). 2021 Dec 14;13(24):6267.

[High-throughput proteomics of breast cancer interstitial fluid: identification of tumor subtype-specific serologically relevant biomarkers](#)

Terkelsen T, Pernemalm M, Gromov P, Børresen-Dale AL, Krogh A, Haakensen VD, Lethö J, Papaleo E, Gromova I.
Mol Oncol. 2021 Feb;15(2):429-461

[Convergence of Plasma Metabolomics and Proteomics Analysis to Discover Signatures of High-Grade Serous Ovarian Cancer](#)

Ahn HS, Yeom J, Yu J, Kwon YI, Kim JH, Kim K.
Cancers (Basel). 2020 Nov 19;12(11):3447.

Advancing Oncology Research with Thermo Scientific Mass Spectrometry

Research publications

[A circulating extracellular vesicles-based novel screening tool for colorectal cancer revealed by shotgun and data-independent acquisition mass spectrometry](#)

Zheng X, Xu K, Zhou B, Chen T, Huang Y, Li Q, Wen F, Ge W, Wang J, Yu S, Sun L, Zhu L, Liu W, Gao H, Yue L, Cai X, Zhang Q, Ruan G, Zhu T, Wu Z, Zhu Y, Shao Y, Guo T, Zheng S

Extracell Vesicles. 2020 Apr 14;9(1):1750202.

[Unravelling the proteomic landscape of extracellular vesicles in prostate cancer by density-based fractionation of urine](#)

Dhondt B, Geeurickx E, Tulkens J, Van Deun J, Vergauwen G, Lippens L, Miinalainen I, Rappu P, Heino J, Ost P, Lumen N, De Wever O, Hendrix A.

J Extracell Vesicles. 2020 Mar 11;9(1):1736935.

[Plasma proteomics-based identification of novel biomarkers in early gastric cancer](#)

Zhou B, Zhou Z, Chen Y, Deng H, Cai Y, Rao X, Yin Y, Rong L.

Clin Biochem. 2020 Feb;76:5-10.

Review articles

[Unveiling the potential of proteomic and genetic signatures for precision therapeutics in lung cancer management](#)

Srivastava S, Jayaswal N, Kumar S, Sharma PK, Behl T, Khalid A, Mohan S, Najmi A, Zoghebi K, Alhazmi HA.

Cell Signal. 2024 Jan;113:110932.

[Recent developments in mass-spectrometry-based targeted proteomics of clinical cancer biomarkers](#)

Wenk D, Zuo C, Kislinger T, Sepiashvili L.

Clin Proteomics. 2024 Jan 30;21(1):6.

[Frontiers in mass spectrometry-based clinical proteomics for cancer diagnosis and treatment](#)

Haga Y, Minegishi Y, Ueda K.

Cancer Sci. 2023 May;114(5):1783-1791.

[Mass Spectrometry-Based Proteomics Workflows in Cancer Research: The Relevance of Choosing the Right Steps](#)

Carrillo-Rodriguez P, Selheim F, Hernandez-Valladares M.

Cancers (Basel). 2023 Jan 16;15(2):555.

[Data-independent acquisition mass spectrometry \(DIA-MS\) for proteomic applications in oncology](#)

Krasny L, Huang PH.

Mol Omics. 2021 Feb 1;17(1):29-42.

[Recent advances in mass spectrometry based clinical proteomics: applications to cancer research](#)

Macklin A, Khan S, Kislinger T.

Clin Proteomics. 2020 May 24;17:17.

[Mass spectrometry based proteomics and metabolomics in personalized oncology](#)

Kowalczyk T, Ciborowski M, Kisluk J, Kretowski A, Barbas C.

Biochim Biophys Acta Mol Basis Dis. 2020 May 1;1866(5):165690.

 Learn more at thermofisher.com

For Research Use Only. Not for use in diagnostic procedures. © 2024 Thermo Fisher Scientific Inc.

All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified. FL003459 1124