Proteomics Study Details																
Studeis		**Sample Collection**					**Sample inforamtion**			**Method**		**Statistical analysis**				
Referece	**Year of Publication**	**Sample**	**Sample Amount**	**Centrifugation**	**Biosource**	**Storage**	**Control (No.)**	**Breast Cancer (No.)**	**Cancer Stage**	**Technique**	**Validation**	**Sensitivity**	**Specificity**	**Hypothesis test performed**	**Data availibility**	**p-value cut off (adjusted)**
Bartkowiak et al.,2021	2021	Blood in EDTA	9 ml	2000 × g for 20 min, 4 °C	Plasma	Short term: −20 °C Long term: −80 °C	• **Training set:** 324 HW • **Validation set: 15** BBD + 103 HW	• **Training set:** 100 BC early detection • **Validation set:** 44	M0, M1	ELISA	NA	80%	99%	Pearson/Generalized linear model with gamma distribution/Binomial logistic regression/Spearman's rank order correlation	Yes	<0.05
Sun et al., 2016	2016	Blood	5 ml	3000 rpm for 5 min + 5 min at 12000 rpm	Serum	−80 °C	20	60	NA	SELDI-TOF-MS	SDS-PAGE & MALDI-TOF/TOF	NA	NA	Student's t-test	NO	<0.05
Böhm et al., 2011	2011	Blood	NA	3280 x g for 5 min, 4˚C	Serum	−80 °C	46	45	NA	SELDI-TOF & MALDI-TOF-TOF	NA	89%	67%	t-tests Multivariate discrimination analysis ANOVA ANN ROC	NO	<0.05
Wang et al., 2014	2014	Nipple discharge	0.5 mL	NA	Nipple discharge	NA	136 BBD 60 HW	86	Grade II, III	Electrochemiluminescence	NA	CA15-3: 74.4% CA125: 72.1% CEA: 69.8% TSGF: 69.8	CA15-3: 82.4% CA125: 83.8% CEA: 86.0% TSGF: 83.1	Mann-Whitney U-test Kruskal-Wallis Univariate analysis Multivariate analysis	NO	<0.05
Wang et al., 2014	2014	Blood in Heparin	3ml	NA	Serum	NA	136 BBD 60 HW	86	Grade II, III	Electrochemiluminescence	NA	CA15-3: 60.5% CA125: 55.8% CEA: 53.5% TSGF: 62.8	CA15-3: 91.9% CA125: 90.4% CEA: 89.0% TSGF: 91.2	Mann-Whitney U-test Kruskal-Wallis Univariate analysis Multivariate analysis	NO	<0.05
Beretov et al., 2015	2015	Urine	30–50 mL	2000 x g for 10 min, 4°C	Supernatant of urine	Short term: −20 °C Long term: −80 °C	20 HW	20	Pre-invasive Early invasive Metastatic	Label-free LC-MS/MS	Western blotting Immunohistochemistry	NA	NA	ANOVA	Yes	<0.05
Gajbhiye et al., 2016	2016	Urine preservative (0.02% w/v sodium azide)	20 mL	7000 × *g* for two to three times	Supernatant of urine	NA	**Standardization phase:** 3 HW **Discovery phase:** 24 HW **Validation phase:** 16 HW	**standardization phase:** 3 HE BC **Discovery phase:** 24 **Validation phase:** 16	pT1 / pT2	Standardization phase: 2-D gel electrophoresis Discovery phase: 2D-DIGE, MALDI-TOF-TOF, SWATH-MS, iTRAQ, LC-QTOF	WB & MRM	NA	NA	Multivariate analysis Chi-square (2)	NO	<0.05
Orlanda et al.,2014	2014	Blood	NA	NA	plasma	NA	121 HW 88 BBD	65	pT1 / pT2 / pT3	SELDI-TOF-MS	NA	NA	NA	Wilcoxon–Mann–Whitney Logistic regression Kruskal–Wallis Spearman	NO	<0.05
Arko-Boham et al., 2020	2020	Blood	5 ml	2500 rpm for 20 min	Serum	−20 °C	32 HW	32	Grade I-X	ELISA	NA	NA	NA	One-way ANOVA Chi-square	Yes	≤ 0.05
Tan et al.,2016	2016	Blood	NA	NA	Serum	−80 °C	120 BBD 40 HW	378	0–III	ELISA	NA	72%	70%	Mann-Whitney U test Kruskal-Wallis COX regression analysis	NO	< 0.05
Moradpoor et al., 2020	2020	Blood	NA	NA	PBMCs	NA	3 HW	21	NA	LC-MS/MS	Quantitative Real-Time PCR	NA	NA	Student's t-test ANOVA	Yes	< 0.05
Scumaci et al., 2015	2015	Blood in EDTA	4 ml	1300 x g for 10 min	Plasma	−80 °C	4 Healthy family members sharing the same mutation/ 4 Healthy relatives	4 Inherited BC	NA	2D gel analysis LC-MS/MS	Western Blotting	NA	NA	Unpaired t-test	Yes	<0.05
Chen et al.,2017	2017	Blood in EDTA	NA	4,000 × g for 30 min/ Ultra high speed centrifugation for EV extraction	EV in plasma	−80 °C	6 HW	18	NA	LC-MS/MS	Western Blotting	NA	NA	t-tests	Yes	<0.05
Goufman et al., 2006	2006	Blood	NA	10,000g for 15 min	Serum thermostable fraction	NA	10 HW	10	I-III	2D electrophoresis combined with MALDI-TOF-TOF	NA	NA	NA	Kruskal–Wallis Wilcoxon Paired test	NO	<0.05
Hu et al., 2005	2005	Blood	NA	NA	Serum	−80 °C	51 BBD/ 33 HW	49	I–IV	SELDI-TOF-MS	NA	79.59%	77.38%	Kruskal–Wallis Fisher exact test Artificial neural networks	NO	<0.05

Studeis		Sample Collection					Sample inforamtion			Method		Statistical analysis				
Referece	**Year of Publication**	**Sample**	**Sample Amount**	**Centrifugation**	**Biosource**	**Storage**	**Control (No.)**	**Breast Cancer (No.)**	**Cancer Stage**	**Technique**	**Validation**	**Sensitivity**	**Specificity**	**Hypothesis test performed**	**Data availibility**	**p-value cut off (adjusted)**
														Artificial neural networks		
Zajkowska et al., 2020	2020	Blood in EDTA	NA	1000×g for 15 min at 2–8°C	Plasma	–85°C	28 BBD 32 HW	120	I-IV	ELISA	NA	90%	98.33%	U-Mann Whitney Kruskal-Wallis Multivariate analysis	NO	<0.05
Zajkowska et al., 2020	2020	Blood in EDTA	NA	1000×g for 15 min at 2–8°C	Plasma	–85°C	28 BBD 32 HW	120	I-IV	Chemiluminescent Microparticle Immuno Assay (CMIA)	NA	58.33%	95%	U-Mann Whitney Kruskal-Wallis Multivariate analysis	NO	<0.05
Li et al., 2005	2005	NAF in 10-uL graduated micropipette	NA	1500 rpm for 10 min	NAF	−80 °C	5 HW	5	I/II	SELDI-TOF-MS	ELISA	NA	NA	Supervised cluster analysis Unsupervised cluster analysis	NO	NA
Li et al., 2005	2005	Ductal Lavage Fluid	NA	1500 rpm for 10 min	Ductal Lavage Fluid	−80 °C	14 High risk women	14 Unilateral BC	I/II	SELDI-TOF-MS	ELISA	NA	NA	Supervised cluster analysis Unsupervised cluster analysis	NO	NA
TM Pawlik et al., 2005	2005	NAF	NA	1500 rpm for 10 min	NAF	−80 °C	5 HW	23 Unilateral invasive BC	I/II	SELDI-MS	NA	NA	NA	Paired t-tests	NO	<0.05
Noble et al., 2007	2007	NAF	0 to >100 µl	NA	NAF	−80 °C	44 HW	21 Unilateral BC	Grade I-III+ High grade DCIS	SELDI-TOF-MS	NA	NA	NA	Mann–Whitney U-test	NO	<0.05
Sauteret al, 2005	2005	NAF	1 to 200 µl	NA	NAF	−80 °C	87 HW	27	NA	SELDI-TOF-MS	NA	NA	NA	Two-tailed Fisher's Exact Test Chi square test Kruskal Wallis Test Logistic regression	NO	NA
LEBRECHT et al., 2009	2009	Tear in Schirmer strips	NA	NA	Tear	−80 °C	50 HW	50	pT1, pT2, pT3	SELDI-TOF-MS	NA	~70%	~70%	t-test Multivariate statistical analysis Artificial neural networks	NO	<0.05
BÖHM et al., 2012	2012	Tear in Schirmer strips	NA	NA	Tear	−80 °C	25 HW	25	pT1, pT2	MALDI-TOF-TOF	NA	~70%	~70%	In-house-developed algorithm	NO	NA
LEBRECHT et al., 2009	2009	Tear in Schirmer strips	NA	NA	Tear	−80 °C	10 HW	10	NA	SELDI-TOF-MS	NA	~90%	~90%	t-test Multivariate statistical techniques Artificial neural networks	NO	NA
LEBRECHT et al., 2009	2009	Blood	NA	4000 xg for 5 min	Serum	−80 °C	10 HW	10	NA	SELDI-TOF-MS	NA	~90%	~90%	t-test Multivariate statistical techniques Artificial neural networks	NO	NA
Oguz Soydinc et al., 2012	2012	Blood	NA	NA	Serum	−20 °C	60 HW	180	NA	ELISA	NA	86.70%	70%	Mann Whitney U Spearman's correlation test	NO	<0.05
Oguz Soydinc et al., 2012	2012	24-hour urine	NA	NA	Urine	−20 °C	61 HW	181	NA	ELISA	NA	66.70%	70%	Mann Whitney U Spearman's correlation test	NO	<0.05
Gon Moon et al.,2016	2016	Blood	NA	NA	EV in plasma	NA	**Test:** 20 BBD/ 30 Noncancerousdiseases/ 30 HW **Validation:** 35 BBD/ 50 Noncancerousdiseases/ 40 HW	**Test:** 150 BC/ 40 After surgery **Validation:** 90 BC	0-IV	ELISA	NA	**Test:** 65.1% **Validation:** 69.2%	**Test:** 83.2% **Validation:** 73.3%	Unpaired t-test Spearman correlation Kruskal-Wallis	NO	<0.05
Garczyk et al., 2015	2015	Blood	7.5 ml	1500 g for 10 min at RT	Serum	−80 °C	40 HW	40	pT1-pT4	ELISA	NA	64.50%	89.50%	Mann-Whitney U-test Kruskal-Wallis Fisher's exact test Univariate Kaplan-Meier Multivariate Cox regression	Yes	<0.05
George et al., 2021	2021	NAF	NA	NA	NAF	−80 °C	4 HW	9	pT1-pT3	LC-MS/MS	NA	NA	NA	Two-sample t-test Pearson Correlation	Yes	<0.05
Corrêa et al., 2017	2017	Blood Sodium EDTA	20 ml	1400 × g at for 5 min, 4°C	plasma	NA	Discovery Phase:120 HW Validation Phase: 9 HW	Discovery Phase:107 Validation Phase:37	Low and High Grade	Label-free Nano-LC/MSMS	Western Blotting	NA	NA	Mann-Whitney	NO	<0.05

Studeis		Sample Collection					Sample inforamtion			Method		Statistical analysis				
Referece	Year of Publication	Sample	Sample Amount	Centrifugation	Biosource	Storage	Control (No.)	Breast Cancer (No.)	Cancer Stage	Technique	Validation	Sensitivity	Specificity	Hypothesis test performed	Data availibility	p-value cut off (adjusted)

NA: Not Available, EDTA: Ethylenediaminetetraacetic Acid, K2 EDTA: Dipotassium Ethylenediaminetetraacetic Acid, h: Hour, min: Minute, RT: Room Temperature, ST: Short-Term, LT: Long-Term, HW: Healthy Woman, BBD: Benign Breast Disease, WB: Western Blotting, ELISA: Enzyme-linked Immunosorbent Assay, ANN: Artificial Neural Network, ROC: Receiver Operating Characteristic.

Metabolomics Study Details																
Studeis		**Sample Collection**					**Sample inforamtion**			**Method**		**Statistical analysis**				
Referece	**Year of Publication**	**Sample**	**Sample Amount**	**Centrifugation**	**Biosource**	**Storage**	**Control (No.)**	**Breast Cancer (No.)**	**Cancer Stage**	**Technique**	**Validation**	**Sensitivity**	**Specificity**	**Hypothesis test performed**	**Data availibility**	**p-value cut off (adjusted)**
Yuan et al., 2018	2018	Blood in EDTA	NA	**Blood:** 1300 g for 20 min 10°C **Plasma:** 15500 g for 10 min at 10°C	Plasma	−80 °C	**Training:** 100 HW **Validation:** 50 HW	**Training:** 80 BC **Validation:** 109 BC	0-IV	UHPLC-MS/MS FIA-MS/MS	NA	NA	NA	ASSO regression analysis Univariant logistic regression	Yes	<0.05
Rashed et al., 2020	2020	Blood	3 mL	4000 rpm for 5 min	Serum	−20 °C	55 HW 47 BBD	120	Early Advanced Metastasis	GC-MS ELISA for CA15-3	NA	**Combined metabolome with CA15-3:** 88.8%	**Combined metabolome with CA15-3:** 86.8%	Nonparametric analyzes Linear treNA analysis Multiple linear regression stepwise model	NO	<0.05
Hadi et al., 2017	2017	Blood	4 mL	4000 rpm for 10 min at 4 °C	Serum	−80 °C	155 HW	155	I-IV	GC-MS	NA	96%	100%	Student t-test One way ANOVA Partial Least Square Discriminant Analysis (PLS-DA)	Yes	<0.05
Jove et al., 2017	2017	Blood in EDTA	NA	NA	Plasma	−80 °C	20 HW	91	I-IV	LC-MS	NA	90%≤ ≤100%	90%≤ ≤100%	Student T-test Fisher's exact Test Multivariate statistics RaNAom Forest (RF) classifier	Yes	<0.05
Park et al . 2019	2019	Blood in EDTA	NA	3000 ×g for 10 min at 4°C	Plasma	−80 °C	**Training:** 30 HW **Validation:** 16 HW	**Training:** 40 **Validation:** 30	I–III	LC-MS	NA	NA	NA	Kruskal-Wallis Mann-Whitney U tests	Yes	<0.05
Wei et al., 2021	2021	Blood in EDTA	NA	1500 xg for 10 min at RT	Plasma	−80 °C	86 HW	124	I–III	LC-QTOF-MS LC-QQQ-MS	NA	90%	90%	Student's t test PLS-DA OPLS-DA	Yes	<0.05
Luo et al., 2021	2021	Blood	NA	NA	Serum	−80 °C	29 BBD	47	NA	UPLC-QTOF-MS	NA	100%	92.30%	Student's t test Kruskal Wallis H tes Binary logistic regression PLS-DA	Yes	<0.05
Eniu et al., 2018	2018	Blood	5 mL	3000 rpm for 10 min at 4°C	Serum	−80 °C	26	30	I–III	UHPLC-QTOF-(ESI+)-MS	NA	66%≤ ≤97%	73%≤ ≤92%	Pearson test PCA PLS-DA	No	<0.05 < .01 < .001
Kozar et al., 2021	2021	Blood	5 mL	2000xG for 10 min at RT	Serum	−80 °C	21 HW	39	I–III	HPLC-TQ/MS	NA	83%	81%	PLS-DA Univariate analysis MCCV RaNAom Forest algorithm	Yes	<0.05
Wang et al., 2018	2018	Blood	NA	3000 g for 10 min at RT	Serum	−80 °C	**Training:** 44 HW/ 38 BBD **Validation:** 30 HW/ 30 BBD	**Training:** 34 **Validation:** 30	NA	UPLC/MS-MS GC-MS/MS	UPLC/MS-MS GC-MS/MS	NA	NA	One-way ANOVA Multivariate statistical analysis PLS-DA	NO	<0.05
Xie et al., 2015	2015	Blood	NA	NA	Plasma/ Serum	−80 °C	**Training:** 35 HW **Validation Set 1:** 41HW **Validation Set 2:** 31HW **Validation Set 3:** 70	**Training:** 35 **Validation Set 1:** 103 **Validation Set 2:** 103 **Validation Set 3:** 80	I-IV	LC-TOFMS & GC-TOFMS	NA	100%	100%	OPLS-DA Mann-Whitney test logistic regression	NO	<0.05
Jasbi et al., 2018	2018	Blood	NA	NA	Plasma	NA	99 HW	102	I–III	LC-MS/MS	NA	80%	75%	Univariate aNA multivariate model Linear model PLS-DA	Yes	<0.05
Suman et al., 2018	2018	Blood in EDTA	NA	1200×g for 20 min at 4◦C	Plasma	−80 °C	50 HW	72	I-IV	1H NMR spectroscopy	NA	NA	NA	Multivariate aNA nonparametric statistical analysis	Yes	<0.05
Oktay et al., 2020	2020	Blood	NA	1200 rcf for 10 min at RT	Plasma	−80 °C	47 HW	49	NA	GC/MS	ELISA	NA	NA	Student's t test RaNAom forest algorithm Pearson's correlation coefficient Logistic regression	Yes	<0.05
Qiu et al., 2013	2013	Blood	NA	NA	Plasma	NA	**Training:** 20 HW **Validation:** 5 HW	**Training:** 30 **Validation:** 23	I-IV	ESI-MS/MS	NA	98.10%	96.00%	OPLS-DA Nonparametric univariate method Student's t-test	NO	<0.05
Hu et al., 2016	2016	Urine	NA	NA	Urine	NA	32 BBD	33	0-IV	Colloid GoldAggregation	NA	NA	NA	Student's t tes	NO	<0.05
Hu et al., 2016	2016	Blood	NA	NA	Plasma	NA	32 BBD	33	0-IV	LC-MS/M	NA	NA	NA	Student's t tes Wilcoxon's sign rank test	NO	<0.05

Studeis		Sample Collection					Sample inforamtion			Method		Statistical analysis				
Referece	Year of Publication	Sample	Sample Amount	Centrifugation	Biosource	Storage	Control (No.)	Breast Cancer (No.)	Cancer Stage	Technique	Validation	Sensitivity	Specificity	Hypothesis test performed	Data availibility	p-value cut off (adjusted)
Murata et al., 2019	2019	Saliva in polypropylene tube	400 µL	NA	Saliva	−80 °C	42 HW	101 IC 23 DCIS	0-IV	CE-TOF–MS	LC-QQQ-MS	NA	NA	Mann–Whitney test Kruskal–Wallis test Multiple logistic regression Multiple ADTree models	Yes	<0.05 < .01 < .001
Zhong et al., 2016	2016	Saliva	2 mL	13500 rpm for 20 min at 4°C	Saliva	− 40 °C	25 HW	30	I-IV	UPLC-MS	NA	48.1%≤ ≤92.6%	54.2% ≤ ≤100%	Mann-Whitney U test PLS-DA PCA	NO	<0.05
Huang et al., 2012	2012	Urine	NA	NA	Urine	−80 °C	36 HW	86 Postmenopausal BC	NA	UFLC-MS/MS	NA	NA	NA	Paired t-test	NO	<0.05
More et al., 2018	2018	Urine (Time not mentioned)	NA	5000 g for 10 min at 4 °C	Urine	−80 °C	63 HW	63 IDC	NA	LC-MRM/MS GC–MS	NA	NA	NA	t-test PCA PLS-DA ROC	NO	<0.05
Lee et al., 2013	2013	Urine (Time not mentioned)	NA	NA	Urine	−20 °C	11 HW	6	NA	GC-MS / LC-MS	NA	NA	NA	PCA PLS-DA t-test ANOVA	NO	<0.05
Slupsky et al., 2010	2010	Urine (Time not mentioned)	NA	NA	Urine	−80 °C	72 HW	48	NA	NMR spectroscopy	NA	NA	NA	PCA, PLS-DA, OPLS-DA Wilcoxon's rank-sum test	NO	<0.05
Cala et al., 2018	2018	First morning Urine	NA	3000 xg for 10 min at RT	Urine	−80 °C	29 HW	31	I–III	LC-QTOF/MS GC-MS	NA	93%	86%	PCA, OPLS-DA Univariate analysis Unpaired t-test Mann −Whitney U test	Yes	<0.05
Silva et al., 2012	2012	Morning Urine	NA	NA	Urine	−80 °C	21 HW	26	NA	HS-SPME & GC–qMS	NA	NA	NA	One way ANOVA LSD test PCA	Yes	<0.05
Woo et al., 2009	2009	Urine (Time not mentioned)	NA	NA	Urine	−20 °C	12 HW 12 Cervical Cancer 9 Ovarian Cancer	10	NA	GC-MS LC-MS	NA	NA	NA	ANOVA PLS-DA	Yes	<0.05
Zhou et al., 2017	2017	Morning urine	NA	No Centrifugaton	Urine	−80 °C	11 HW	11	I-IV	1H-NMR	NA	NA	NA	PCA, PLS-DA	NO	<0.05
Do Canto et al., 2016	2016	Ductal lavage fluid	NA	NA	Ductal fluid	−80 °C	43 Non-affected contralateral breast	43 Affected breast	0-III	UPLC-QTOF	NA	90.70%	88.40%	Paired t-tests LASSO regression PCA, PLS-DA One way ANOVA	NO	<0.05

NA: Not Available, EDTA: Ethylenediaminetetraacetic Acid, K2 EDTA: Dipotassium Ethylenediaminetetraacetic Acid, h: Hour, min: Minute, RT: Room Temperature, ST: Short-Term, LT: Long-Term, HW: Healthy Woman, BBD: Benign Breast Disease, WB: Western Blotting, ELISA: Enzyme-linked Immunosorbent Assay, ANN: Artificial Neural Network, ROC: Receiver Operating

Lipidomics Study Details																	
Studeis		**Sample Collection**					**Sample inforamtion**			**Method**			**Statistical analysis**				
Referece	**Year of Publication**	**Sample**	**Sample Amount**	**Centrifugation**	**Biosource**	**Storage**	**Control (No.)**	**Breast Cancer (No.)**	**Cancer Stage**	**Extraction method**	**Technique**	**Validation**	**Sensitivity**	**Specificity**	**Hypothesis test performed**	**Data availibility**	**p-value cut off (adjusted)**
Hammad et al., 2009	2009	Blood	NA	1200 xg for 12 min at 20˚C	Serum	−80 °C	25 HW	50	IV	Extracted with CHCl3, MeOH aNA H2O. The bottom CHCl3 layer was dried uNAer nitrogen.	Flow injection-ESI-MS3	NA	NA	NA	Single-factor ANOVA Non-parametric ROC analysis	NO	<0.05
Chen et al., 2016	2016	Blood in EDTA	NA	2600 xg for 10 minutes at 4°C	Plasma	−80 °C	• **Training Set:** 51 BBC • **Validation Set**: 59 BBC	• **Training Set:** 39 • **Validation Set:** 45	0-II	Bligh aNA Dyer method with modifications	LC-ESI-MS/MS	Validated	**Training:** 83.3%, **Validation:** 81.0%	**Training:** 92.7%, **Validation**: 94.5%	Binary logistic regression Student's t-test ROC	NO	<0.05
Wolrab et al., 2021	2021	Blood in Lithium-heparin	9 ml	NA	Plasma	−80 °C	• **Training Set:** 135 HW • **Validation Set**: 57 HW	• **Training Set:** 77 • **Validation Set:** 26	I-IV	Folch method	UHPSFC/MS Shotgun MS	Validated	91%	97%	OPLS-DA PCA t-test	Yes	<0.05
Qiu et al., 2013	2013	Blood	NA	NA	Plasma	NA	• **Training Set:** 20 HW • **Validation Set**: 5 HW	• **Training Set:** 30 • **Validation Set:** 23	I-IV	NA	ESI-MS/MS	Validated	98.10%	96%	OPLS-DA PCA Student's t-test Binary logical regression	NO	<0.05
Eghlimi et al. 2020	2020	Blood	NA	NA	Plasma	NA	45 HW	121	I-lll	Extracted with MeOH/MTBE	LC-MS/MS	Validated	96%	76%	PLS-DA OPLS-DA Two-tailed t-tests ROC	Yes	<0.05
Zhang et al., 2014	2014	Blood	NA	NA	Serum	NA	• **Training Set:** 70 HW • **Validation Set**: 132 HW	• **Training Set:** 68 • **Validation Set:** 72	I-IV	Extracted with MeOH/CAN	FTICR MS	Validated	83.30%	87.10%	Mann–Whitney U test ROC	Yes	<0.05
Cui et al., 2016	2016	Blood	NA	NA	Serum	NA	20 HW	20	I-III	Extracted with MeOH	LC-QTOF-MS/MS	Validated	NA	NA	Wilcoxon Mann–Whitney PLS-DA OPLS-DA	NO	<0.05
Yang et al., 2015	2015	Blood	NA	NA	Plasma	NA	9 HW 6 BBC	5	NA	Bligh aNA Dyer with modifications	NP/RP 2D LC-MS	NA	NA	NA	Mann–Whitney U test PCA	NO	<0.05
Jiang et al., 2017	2017	Blood in heparin	10 ml	1500 xg for 15 min	Plasma	−80 °C	41 HW	37	I–II	Extracted with Isopropanol	UPLC-QTOF/MS	NA	NA	NA	One-way ANOVA t-tests OPLS-DA Univariate statistical analysis	NO	<0.05
Min et al., 2010	2010	Urine	NA	NA	Lyophilized Urine	NA	5 HW	5	NA	Folch method	Nanoflow LC-ESI-MS/MS	NA	NA	NA	NA	NO	NA
Kim et al., 2009	2009	Urine	NA	NA	Lyophilized Urine	NA	5 HW	5	NA	Folch method	Nanoflow LC-ESI-MS/MS	NA	NA	NA	NA	NO	NA
Cala et al., 2018	2018	First-pass urine	NA	3000 x g for 10 min at room temperature	Supernatant of urine	−80 °C	29 HW	31	I-III	Extracted with MeOH/MTBE/Deionized water	LC–MS	NA	93%	86%	OPLS-DA Unpaired t-test Mann −Whitney U test ROC	Yes	<0.05
															Mann–Whitney U-test		

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Referece	Year of Publication	Sample	Sample Amount	Centrifugation	Biosource	Storage	Control (No.)	Breast Cancer (No.)	Cancer Stage	Extraction method	Technique	Validation	Sensitivity	Specificity	Hypothesis test performed	Data availibility	p-value cut off (adjusted)
Bel'skaya et al., 2021	2021	Saliva in polypropylene tubes	1 ml	10,000× g for 10 min	Saliva	Without freezing and storage	100 HW	30	T2N0-1 T3N0-1	Folch method	IR spectroscopy	NA	NA	NA	Kruskal–Wallis test Discriminant analysis	NO	NA

NA: Not Available, EDTA: Ethylenediaminetetraacetic Acid, K2 EDTA: Dipotassium Ethylenediaminetetraacetic Acid, h: Hour, min: Minute, RT: Room Temperature, ST: Short-Term, LT: Long-Term, HW: Healthy Woman, BBD: Benign Breast Disease, WB: Western Blotting, ELISA: Enzyme-linked Immunosorbent Assay, ANN: Artificial Neural Network, F