

SUPPLEMENTARY MATERIAL

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Table S1. Exclusion codes.

OHIP FEE CODE	DESCRIPTION
R112	Augmentation mammoplasty – Unilateral Implant
Z142	Removal of Breast Prosthesis
E505	Breast- with limited axillary node sampling
E506	With Axillary sentinel node biopsy- add to R111
E546	With axillary node dissection up to axillary vein- add to R111
R108	Simple Mastectomy
R109	Mastectomy –modified or radical modified (with or without biopsy)
R117	Subcutaneous with nipple preservation

Table S2. Ontario specific diagnostic codes and unit costs.

CODE	DESCRIPTION	H (tech)	P (prof)
X172	Mammogram (screening) – unilateral	\$28.05	\$16.90
X178	Mammogram (screening) – bilateral	\$37.15	\$27.00
X194 ^a	Additional coned views with or without magnification (limit of two per breast) per film	\$5.95	\$5.20
X166 ^b	Examination using portable machine (\$72.20 fee from Schedule of Facility Fees)	n/a	n/a
X184	Mammogram (diagnostic) – unilateral	\$28.05	\$16.90
X185	Mammogram (diagnostic) – bilateral	\$37.15	\$27.00
X194	Additional coned views with or without magnification (limit of two per breast) per film	\$5.95	\$5.20
X166	Examination using portable machine (\$72.20 fee from Schedule of Facility Fees)	n/a	n/a
J127	Vascular ultrasound breast – scan B-mode per breast	\$23.70	\$13.10
J037	Lymphangiogram – Mammary ductography	n/a	\$70.35
E475	Portable ultrasound - only eligible for payment when personally rendered by a specialist in diagnostic radiology (33) in an area of a hospital outside of the diagnostic imaging department	n/a	\$25.00
X446	MRI breast (unilateral/bilateral) – multi-slice sequence	n/a	\$73.35
X447	MRI breast (unilateral/bilateral) – repeat (another plane, different pulse sequence - to a maximum of 3 repeats).	n/a	\$36.70
X192	CT – Mammary ductography	\$25.05	\$10.65
X121	Stereotactic core breast biopsy	n/a	\$83.15
X201 ^c	Breast biopsy specimen x-ray, per specimen	\$5.95	\$5.20
X480	MRI guidance of biopsy or lesion ablation, breast, unilateral	n/a	\$285.00
L864	SURGICAL PATHOLOGY, LEVEL 4. Gross and microscopic examination of breast (biopsy, not requiring microscopic evaluation of surgical margin; reduction mammoplasty)	n/a	\$48.65
L865	SURGICAL PATHOLOGY, LEVEL 5. Gross and microscopic examination of breast (partial or simple mastectomy; excision requiring microscopic evaluation of surgical margin)	n/a	\$103.20
L866	SURGICAL PATHOLOGY, LEVEL 6. Gross and microscopic examination of breast (mastectomy with regional lymph nodes)	n/a	\$181.65
L805	Aspiration biopsy e.g., lung, breast, thyroid, prostate	n/a	\$81.20
Z141	Needle biopsy (breast) – one or more	n/a	\$37.20
Z143	Needle biopsy - large core breast biopsy - (14 gauge or larger bore needle)	n/a	\$132.75
R107	Tumour or tissue for diagnostic biopsy and/or treatment, e.g., carcinoma, fibroadenoma or fibrocystic disease (single or multiple - same breast)	Asst*6 Anae*6	\$169.95
J149	Ultrasonic guidance of biopsy, aspiration, amniocentesis or drainage procedures (1 physician only)	\$47.30	\$36.85

E525	Tumour or tissue for diagnostic biopsy and/or treatment, e.g., carcinoma, fibroadenoma or fibrocystic disease (single or multiple - same breast) – after localization with mammographic wire or radioactive seeds	n/a	\$48.05
X169	DIAGNOSTIC RADIOLOGY-LAMINOGRAM,PLANIGRAM,TOMOGRAM (default use Ontario cost)	n/a	\$51.25
A225	Consultation	n/a	\$167.35
A220	Genetics - Special genetic consultation	n/a	\$300.70
A223	Genetics - Extended special genetic consultation	n/a	\$401.30
A325	Limited consultation	n/a	\$105.25
A226	Repeat consultation	n/a	\$105.25
A221	Genetic minor assessment	n/a	\$38.05
K016	Genetic assessment, patient or family, direct contact, per	n/a	\$74.05
K222	Genetic care per ½ hr	n/a	\$75.75
K223	Clinical interpretation	n/a	\$38.20
K229	Complex genetic test interpretation	n/a	\$65.85
K044	Genetic counselling on behalf of a third party	n/a	\$62.75

^aIf X194 is billed on the same day as a screening mammogram code (i.e., X172 or X178) then cost added to screening mammogram costs. If X194 is billed without a screening mammogram code then cost added to diagnostic mammogram costs.

^bIf X166 is billed on the same day as a screening mammogram code (i.e., X172 or X178) then cost added to screening mammogram costs. If X166 is billed without a screening mammogram code then cost added to diagnostic mammogram costs.

^cIf X201 is billed only and there are no other biopsy codes billed during follow-up (i.e., E525, J149, L805, L864-L866, R107, X121, X480, Z141, or Z143) then exclude X201 from diagnostic biopsy costs.

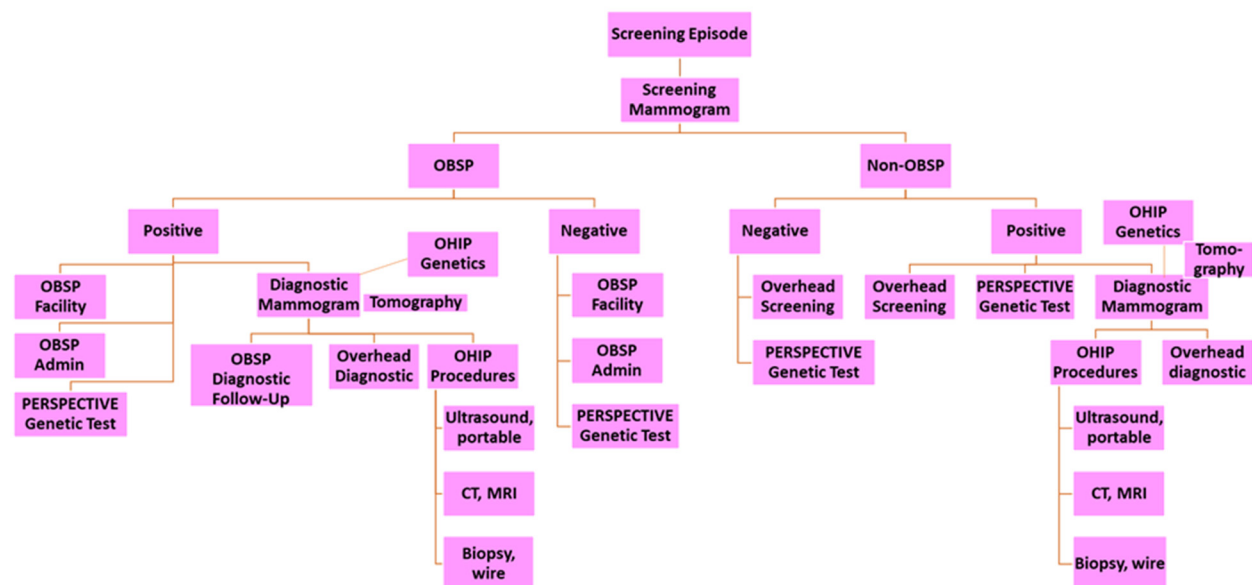


Figure S1. Breast cancer screening schematic.

Table S3. Ontario specific cost assumptions.

OBSP	COST
OBSP facility cost (IHF=\$15.97, hospital=\$21.57) based on database flag for screening mammogram location	IHF= \$15.97 Hospital= \$21.57
OBSP administrative cost (M. Pistilli, personal communication, January 10, 2022)	\$17.52
OBSP diagnostic follow-up cost for those women who had any OHIP diagnostic procedures	\$100.00
NON-OBSP	
Non-OBSP institution/overhead cost	\$51.22

Table S4. Quebec specific unit costs.

CODE	DESCRIPTION	QC Tech Cost 2021	QC Prof Cost 2021
08103	Mammogram (screening) – unilateral	\$24.70	\$9.20
08079	Mammogram (screening) – bilateral	\$40.55	\$18.45
X194	Additional coned views with or without magnification (limit of two per breast) per film USE ONTARIO COSTS	\$5.95	\$5.20
08146	Examination using portable machine (mobile unit)	Assume \$0	\$18.35
08048	Mammogram (diagnostic) – unilateral	\$26.80	\$10.05
08049	Mammogram (diagnostic) – bilateral	\$40.55	\$19.85
X194	Additional coned views with or without magnification (limit of two per breast) per film USE ONTARIO COSTS	\$5.95	\$5.20
08146	Examination using portable machine	Assume \$0	\$18.35
J127	Vascular ultrasound breast – scan B-mode per breast USE ONTARIO COSTS	\$23.70	\$13.10
60705	Lymphangiogram – Mammary ductography USE QC BILATERIAL SURFACE ULTRASOUND	\$67.95	\$70.20
E475	Portable ultrasound - only eligible for payment when personally rendered by a specialist in diagnostic radiology (33) in an area of a hospital outside of the diagnostic imaging department USE ONTARIO COST	\$25.00	Assume \$0
08590	MRI breast (unilateral/bilateral) – multi-slice sequence	Assume \$0	\$151.70
X447	MRI breast (unilateral/bilateral) – repeat USE ONTARIO COST	Assume \$0	\$36.70
X192	CT – Mammary ductography USE ONTARIO COST	Assume \$0	\$35.70
20068	Stereotactic core breast biopsy (BREAST BIOPSY WITH SUCTION-ASSISTED MACROBIOPSY DEVICE)	Assume \$0	\$166.25
X201	Breast biopsy specimen x-ray, per specimen DEFAULT USED ONTARIO COST	\$5.95	\$5.20
00852	MRI guidance of biopsy or lesion ablation breast (UNILATERAL HARPOON UNDER U/S OR STEREOTACTIC GUIDANCE)	Assume \$0	\$121.70
L864	SURGICAL PATHOLOGY, LEVEL 4. Gross and microscopic examination of breast (biopsy, not requiring microscopic evaluation of surgical margin; reduction mammoplasty) DEFAULT USED ONTARIO COST	Assume \$0	\$48.65
L865	SURGICAL PATHOLOGY, LEVEL 5. Gross and microscopic examination of breast (partial or simple mastectomy; excision requiring microscopic evaluation of surgical margin) DEFAULT USED ONTARIO COST	Assume \$0	\$103.20
L866	SURGICAL PATHOLOGY, LEVEL 6. Gross and microscopic examination of breast (mastectomy with regional lymph nodes) DEFAULT USED ONTARIO COST	Assume \$0	\$181.65
00847	Aspiration biopsy e.g. lung, breast, thyroid, prostate (BREAST CYST PUNCTURE W/ASPIRATION)	Assume \$0	\$18.70
Z141	Needle biopsy (breast) – one or more USE ONTARIO COST	Assume \$0	\$37.20
00849	Needle biopsy - large core breast biopsy - (14 gauge or larger bore needle)	Assume \$0	\$128.45

01201	Tumour or tissue for diagnostic biopsy and/or treatment, e.g. carcinoma, fibroadenoma or fibrocystic disease (single or multiple - same breast) (BIOPSY FOR SINGLE/MULTIPLE BENIGN/MALIGNANT LESION OF BREAST)	Assume \$0	\$212.90
J149	Ultrasonic guidance of biopsy, aspiration, amniocentesis or drainage procedures (1 physician only) USE ONTARIO COST	\$47.30	\$36.85
20029	Tumour or tissue for diagnostic biopsy and/or treatment, e.g. carcinoma, fibroadenoma or fibrocystic disease (single or multiple - same breast) – after localization with mammographic wire or radioactive seeds (INSTALLATION OF MARKER GUIDE)	Assume \$0	\$29.15
n/a	OBSP facility cost - Code 08081	\$7.50	n/a
n/a	OBSP administrative cost	\$17.52	n/a
n/a	OBSP diagnostic follow-up cost - Code 08144	\$59.80	n/a
n/a	Overhead cost	\$51.22	n/a
X169	DIAGNOSTIC RADIOLOGY-LAMINOGRAM,PLANIGRAM,TOMOGRAM (default use Ontario cost)	n/a	\$51.25
Z141	Needle biopsy (breast) – one or more (DEFAULT USE ONTARIO COST)	n/a	\$37.20
A221	Genetic minor assessment (DEFAULT USE ONTARIO COST)	n/a	\$38.05
K016	Genetic assessment, patient or family, direct contact, per (USED QC CODE 9164 CONTROL VISIT)	n/a	\$67.60
K229	Complex genetic test interpretation (USED QC CODE 9164 CONTROL VISIT)	n/a	\$67.60
K044	Genetic counselling on behalf of a third party (USED QC CODE 9164 CONTROL VISIT)	n/a	\$67.60