R.G.C.C. - RESEARCH GENETIC CANCER CENTRE S.A.

Assessment of the results:

Patient Name: Mr./Ms._____	**Type of cancer:** _____
Physician: Dr _____	**Stage:**____

Risk of relapse:
CTC concentration
Measured: **isolated ___cells/___ml, SD +/- 0.3cells**
Cut off point <= 5cells/7.5ml

Resistance markers:
MDR1: 45%
MRP: 35%
LRP: 2%
GST: 20%

Metastases/angiogenesis risk related markers

FUNCTION	CLINICAL RISK	MARKERS	RESULTS	OUTCOME
Migration-invasion	HIGH RISK	MMPs	**35%**	HIGH RISK
		KISS-1-r	**-25%**	HIGH RISK
		Nm23	**-10%**	HIGH RISK
Angiogenesis	HIGH RISK	VEGFr	**30%**	HIGH RISK
		FGFr	**25%**	HIGH RISK
		PDGFr	**35%**	HIGH RISK

Proliferation related markers:

MECHANISM	CLINICAL RISK	MARKERS	RESULTS	OUTCOME
Signal transduction pathways	HIGH PROLIFERATIVE SIGNAL	Ras/raf/MEK/Erk1-2	**35%**	HIGH RISK
		mTOR	**20%**	HIGH RISK
Growth factor receptors	HIGH PROLIFERATIVE SIGNAL	EGFr	**40%**	HIGH RISK
		TGF-β1/2	**55%**	HIGH RISK
		c-erb-B2	**normal**	LOW RISK
Hormone receptors	HORMONE DEPENDENT	Estrogen Receptor	**20%**	HIGH RISK
		Progesterone Receptor	**10%**	HIGH RISK
		NC3R4-A	**normal**	LOW RISK
		NC3R4-B	**normal**	LOW RISK
Cell cycle rate	RAPID	P27	**15%**	LOW RISK
		P16	**20%**	HIGH RISK
		P53	**10%**	HIGH RISK

Resistance phenotype markers:

MARKERS	RESULTS	OUTCOME	PHENOTYPE
Dnmt1	**normal**	LOW RISK	NON RESISTANT
06-methyl-DNA-tran.	**normal**	LOW RISK	
HAT	**normal**	LOW RISK	
Histone deacetylase	**normal**	LOW RISK	

Therapeutic options

Conventional cytostatics:

Non cell cycle depended	S phase of cell cycle				Metaphases
Alkyliating agents	***Inhibitors of topoisomerase I***	***Inhibitors of topoisomerase II***	***antimetabolites***	***Inhibitors of tubulin polymerization***	***Spindle poisoning agents***
Cyclophosfamide		Epirubicin	5FU Capecitabine		Docetaxel

Targeted therapies

Moab (Monoclonal Antibodies)	SMW (Small Molecular Weight molecule)
	Fulvestrant as inhibitor of estrogen positive proliferative signal. **Tamoxifen** as inhibitor of estrogen positive feedback. **Anastrozol** as inhibitor of estrogen synthesis. **Exemestane** as inhibitor of aromatase enzyme.

Biological/natural substances:

Class I (cytotoxic agents)	Class II (immuno-modulatory effect)	Class III (growth factors inhibitors)
Agaricus Blazei Murill Amygdalin-(B17) Artecin Ascorbic acid Bio D Mulsion NuMedica Micellized D3 C-statin Poly-MVA Super Artemisinin		Aromat8-PN Curcumin (turmeric) Genistein Indol 3 Carbinol Paw-Paw Quercetin Salvestrol

It is recommended to use in a monthly base one agent from each class and then switch them after a month with the next potent agent from the same class in order to avoid secondary resistance.

Radiotherapy/Hyperthermia sensitivity:

Marker	Result (%)	Clinical outcome per marker	Clinical outcome
HSP90	**-30%**	SENSITIVE	SENSITIVE
HSP72	**-15%**	SENSITIVE	
HSP27	**-25%**	SENSITIVE	

Follow-up options:

YES	✓
NO	

Time interval (when)

After 3 months	After 6 months	After 12 months
✓		

Test for follow-up

ONCOTRAILS							ONCOTRACE	ONCOCOUNT
Breast	Lung	Sarcoma	Colon	GI	Prostate	melanoma		
✓								

Mr./Ms._____
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Day, ___/____/_____