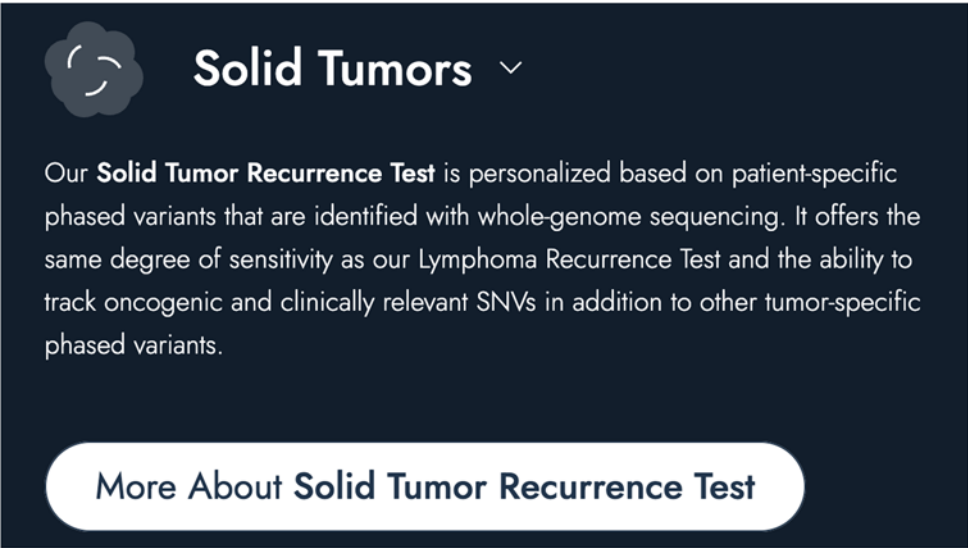
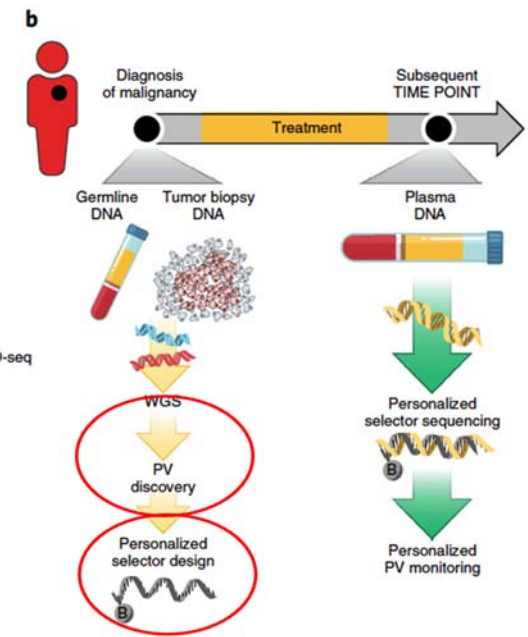
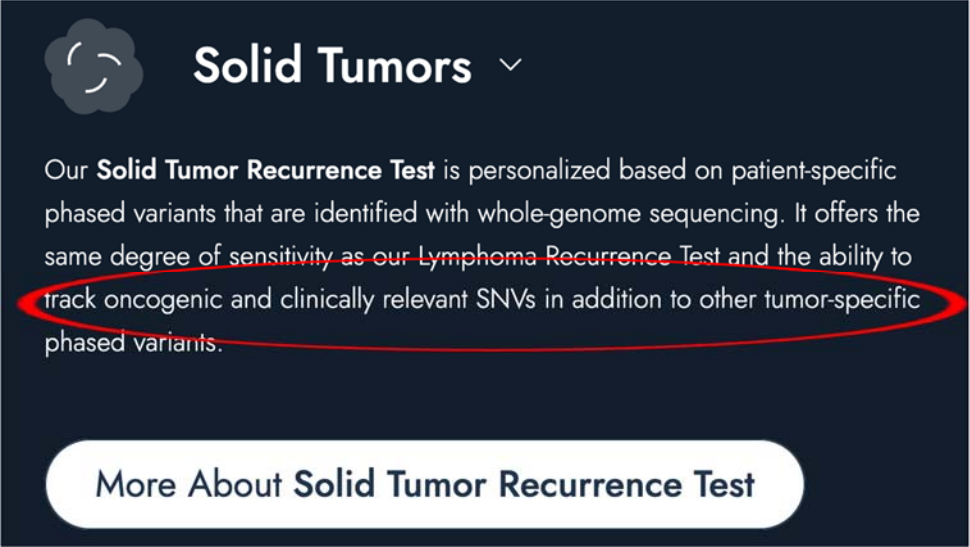


EXHIBIT O

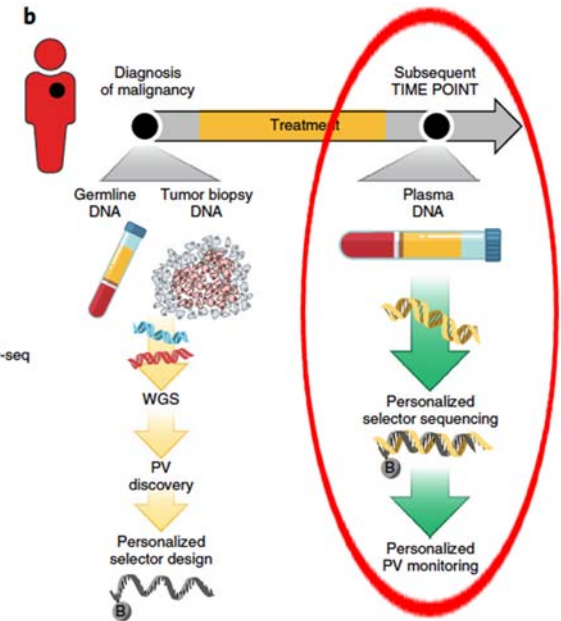
Infringement Of U.S. Patent No. 11,408,033 Patent By Foresight's Solid Tumor Recurrence Test

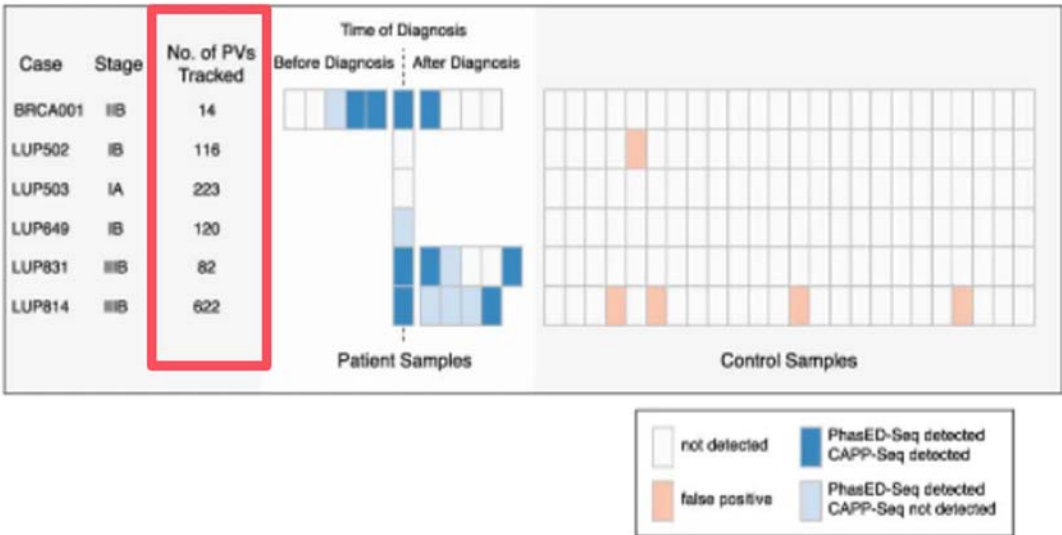
'033 Patent Claim Language	Infringement Support
<p>1. A method for analyzing a nucleic acid sample obtained from an individual, comprising:</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence Test performs a method for analyzing a nucleic acid sample obtained from an individual.</p>  <p>Source: https://foresight-dx.com/partnership</p>
<p>(a) producing, with the aid of a computer processor, a plurality of capture probes, wherein said plurality of capture probes hybridize to a plurality of polymorphisms, wherein said plurality of polymorphisms are in sequences encoding genes with known biomedically interpretable</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test utilizes computer processors to produce capture probes hybridized to polymorphisms. The test sequences both tumor and germline DNA (to provide a reference) in order to identify phased variants that are present in the tumor sample. The polymorphisms are in sequences encoding genes with known biomedically interpretable variants, and are extracted from a database of polymorphisms obtained from the patient, and are observed in a population of one sample previously taken from the patient.</p>

'033 Patent Claim Language	Infringement Support						
variants, and wherein said plurality of polymorphisms are based on or extracted from one or more databases of polymorphisms, and are observed in a population of one or more samples,	<div><p>b</p><p>Source: Kurtz, Fig. 7b</p><table><tr><td>PhasED-Seq (Foresight Diagnostics)</td><td>Hybrid capture-based NGS</td><td>PVs, SNVs</td><td>Baseline: tumor or plasma MRD/monitoring: plasma</td><td>Tumor-informed</td><td>< 0.0001% TF</td></tr></table><p>Chen K et al., MolDiag&Ther 2021</p><p>Source: BloodPac annual meeting slides (BloodPac slides, attached hereto as Exhibit L); Chen, et al., Commercial ctDNA Assays for Minimal Residual Disease Detection of Solid Tumors, MolDiag&Ther (2021) at Table 1 (hereinafter "Chen," attached hereto as Exhibit M).</p><p>In addition, the Foresight Diagnostics Solid Tumor Recurrence test tracks clinically</p></div>	PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF
PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF		

'033 Patent Claim Language	Infringement Support
	<p>relevant polymorphisms that are in genes with known biomedically interpretable variants, wherein said plurality of polymorphisms are based on or extracted from one or more databases of polymorphisms, and are observed in a population of one or more samples:</p>  <p>Source: https://foresight-dx.com/partnership</p>
(b) contacting said nucleic acid sample with said plurality of capture probes produced in (a)	The method of conducting the Foresight Diagnostics Solid Tumor Recurrence test involves contacting nucleic acid samples with capture probes.

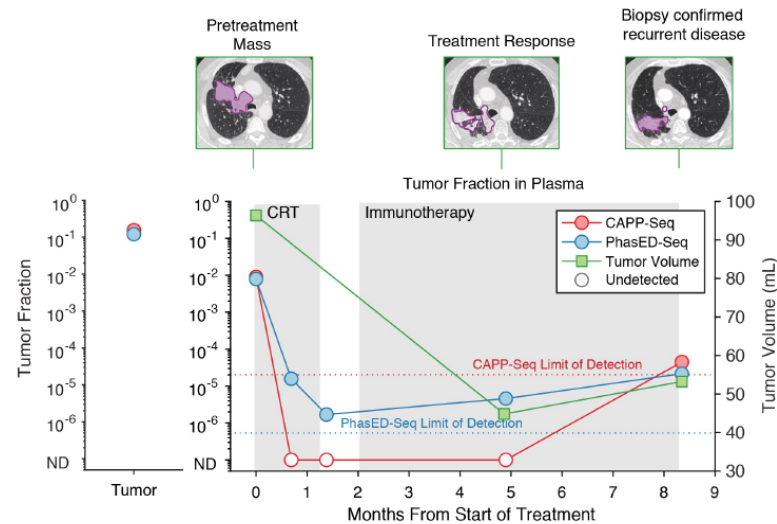
'033 Patent Claim Language	Infringement Support						
	<div><p>b</p><p>Source: Kurtz, Fig. 7b</p><table><tr><td>PhasED-Seq (Foresight Diagnostics)</td><td>Hybrid capture-based NGS</td><td>PVs, SNVs</td><td>Baseline: tumor or plasma MRD/monitoring: plasma</td><td>Tumor-informed</td><td>< 0.0001% TF</td></tr></table><p>Chen K et al., MolDiag&Ther 2021</p></div> <p>BloodPac slides; Chen at Table 1</p>	PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF
PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF		
(c) conducting a sequencing assay on a subset of nucleic acid molecules generated from said nucleic acid sample in step (b) to yield a result comprising a nucleic acid sequence, thereby analyzing said nucleic acid sample; and	The Foresight Diagnostics Solid Tumor Recurrence test conducts a sequencing assay on a subset of nucleic acids generated from the plasma DNA sample.						

'033 Patent Claim Language	Infringement Support
	 <p>Source: Kurtz, Fig. 7b</p>
(d) repeating steps (b)-(c) on a subsequently obtained biological sample from said individual.	<p>The Foresight Diagnostics Solid Tumor Recurrence test repeats the sequencing assay performed multiple times over time. For example, Kurtz at Extended Fig. 10d shows the tracking and identification of the presence or absence of the PVs in subsequently obtained samples.</p>

'033 Patent Claim Language	Infringement Support
	<p data-bbox="772 272 808 321">d</p>  <p data-bbox="758 865 1199 898">Source: Kurtz, Extended Fig. 10d.</p> <p data-bbox="758 930 1822 995">The results of the additional tracking and whether the PVs were observed or not in the subsequently obtained plasma sample may be reported in a biomedical report.</p>


'033 Patent Claim Language

Infringement Support



Source: ASCO Meeting 2021: Abstract #8518: Leveraging phased variants for personalized minimal residual disease detection in localized non-small cell lung cancer, David M. Kurtz, et al. (hereinafter "Kurtz Poster," attached hereto as Exhibit K).

Additionally, the Foresight website indicates the use of time-based reporting and monitoring:

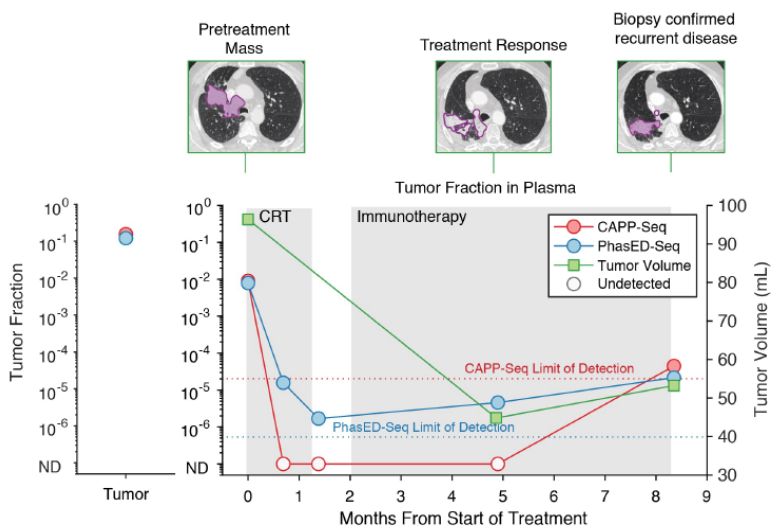
'033 Patent Claim Language	Infringement Support
	 <p>Source: https://foresight-dx.com/technology</p>
<p>2. The method of claim 1, further comprising, subsequent to (c), generating a biomedical report that includes biomedical information of said individual, which biomedical information is indicative of said result.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test generates a biomedical report that includes biomedical information, including whether the polymorphisms identified in the prior sequencing of the plasma samples is or is not present. For example, Kurtz shows in Extended Fig. 10d whether the tracked polymorphisms were detected or not detected in the subsequently analyzed plasma samples from additional time points.</p>

'033 Patent Claim Language	Infringement Support																					
	<div><p>d</p><table border="1"><thead><tr><th>Case</th><th>Stage</th><th>No. of PVs Tracked</th></tr></thead><tbody><tr><td>BRCA001</td><td>IIIB</td><td>14</td></tr><tr><td>LUP502</td><td>IB</td><td>116</td></tr><tr><td>LUP503</td><td>IA</td><td>223</td></tr><tr><td>LUP649</td><td>IB</td><td>120</td></tr><tr><td>LUP831</td><td>IIIB</td><td>82</td></tr><tr><td>LUP814</td><td>IIIB</td><td>622</td></tr></tbody></table><p>Time of Diagnosis: Before Diagnosis, After Diagnosis</p><p>Patient Samples, Control Samples</p><p>Legend:</p><ul style="list-style-type: none">not detectedPhasED-Seq detectedCAPP-Seq detectedfalse positivePhasED-Seq detected CAPP-Seq not detected</div> <p>Source: Kurtz, Extended Fig. 10d.</p>	Case	Stage	No. of PVs Tracked	BRCA001	IIIB	14	LUP502	IB	116	LUP503	IA	223	LUP649	IB	120	LUP831	IIIB	82	LUP814	IIIB	622
Case	Stage	No. of PVs Tracked																				
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LUP502	IB	116																				
LUP503	IA	223																				
LUP649	IB	120																				
LUP831	IIIB	82																				
LUP814	IIIB	622																				
3. The method of claim 2, wherein said biomedical information of said individual is predictive, prognostic, or diagnostic of one or more biomedical features selected from the group consisting of disease state, efficacy of a drug therapy, prediction of optimal drug dosage, recommendation of one or more therapies, and recommendation of a course of treatment of a disease.	<p>The Foresight Diagnostics Solid Tumor Recurrence tests utilizes cfDNA obtained from plasma DNA obtained from individuals and reports out the presence or absence of cancer (disease state) as well as a recommendation on therapy.</p>																					

'033 Patent Claim Language	Infringement Support																					
	<p>d</p> <p>Figure d displays a table of patient cases and their corresponding PV tracking results, along with bar charts for Patient Samples and Control Samples.</p> <table border="1"><thead><tr><th>Case</th><th>Stage</th><th>No. of PVs Tracked</th></tr></thead><tbody><tr><td>BRCA001</td><td>IIIB</td><td>14</td></tr><tr><td>LUP502</td><td>IB</td><td>116</td></tr><tr><td>LUP503</td><td>IA</td><td>223</td></tr><tr><td>LUP649</td><td>IB</td><td>120</td></tr><tr><td>LUP831</td><td>IIIB</td><td>82</td></tr><tr><td>LUP814</td><td>IIIB</td><td>622</td></tr></tbody></table> <p>The bar charts show the results of the additional tracking and whether the PVs were observed or not in the subsequently obtained plasma sample. The legend indicates the following categories:</p> <ul style="list-style-type: none">not detected (white)false positive (orange)PhasED-Seq detected (dark blue)PhasED-Seq detected CAPP-Seq not detected (light blue)	Case	Stage	No. of PVs Tracked	BRCA001	IIIB	14	LUP502	IB	116	LUP503	IA	223	LUP649	IB	120	LUP831	IIIB	82	LUP814	IIIB	622
Case	Stage	No. of PVs Tracked																				
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LUP831	IIIB	82																				
LUP814	IIIB	622																				
	<p>Source: Kurtz, Extended Fig. 10d.</p> <p>The results of the additional tracking and whether the PVs were observed or not in the subsequently obtained plasma sample may be reported in a biomedical report.</p>																					

'033 Patent Claim Language

Infringement Support



Source: Kurtz Poster.

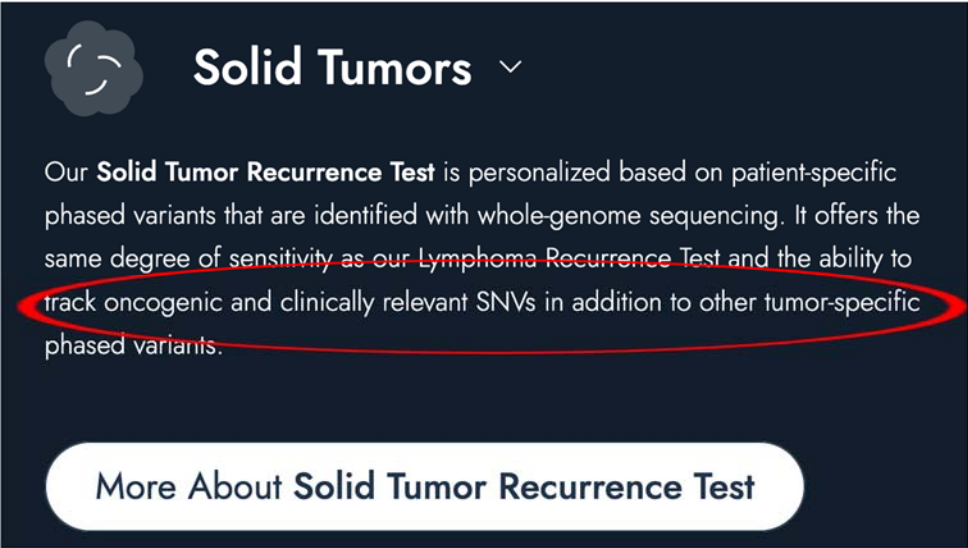
vs Foresight Diagnostics

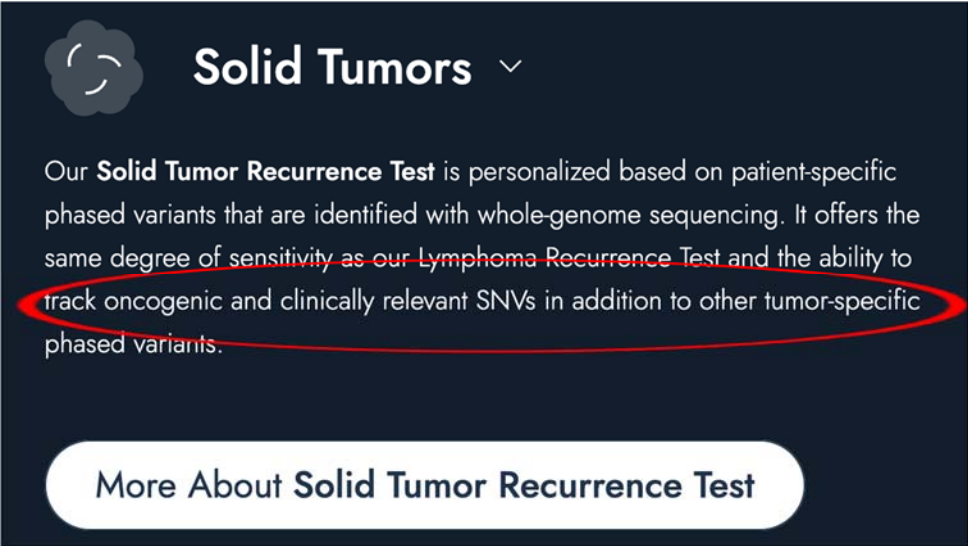
✓ Best-in-class sensitivity at all time-points

✓ Detects relapse **200+ days prior** to clinical relapse⁽¹⁾

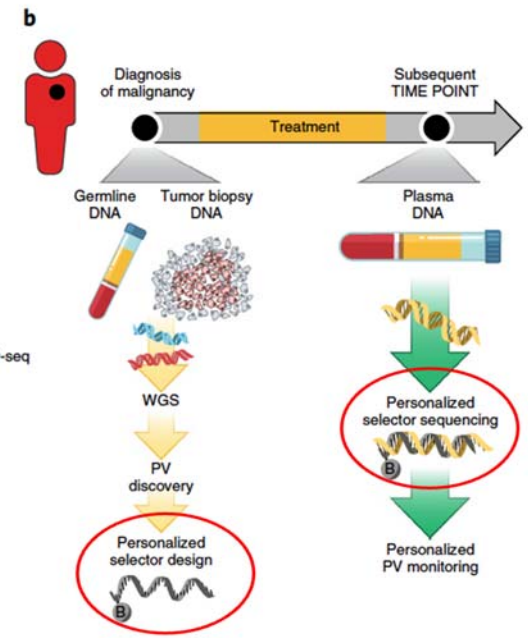
✓ Identifies relapse when **disease burden is low** and **probability of cure is higher**

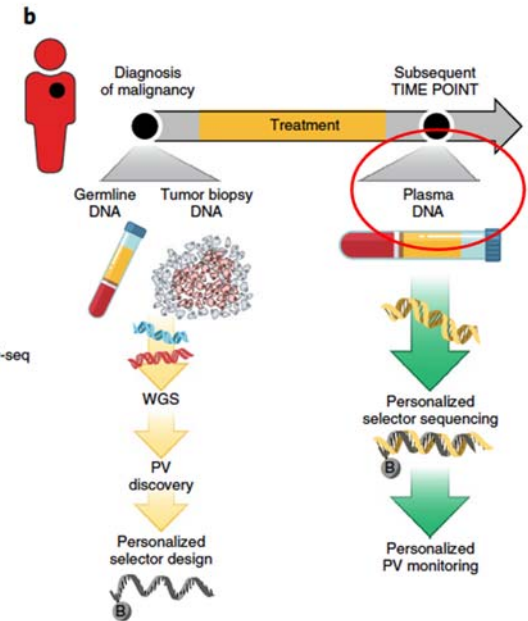
✓ Identifies the majority of patients **in need of additional therapy**

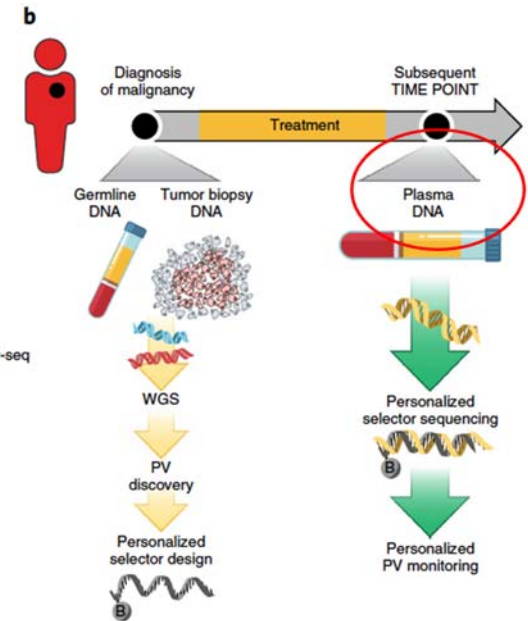
'033 Patent Claim Language	Infringement Support
	Source: https://foresight-dx.com/technology
<p>4. The method of claim 1, wherein said plurality of polymorphisms comprise one or more insertions, deletions, structural variant junctions, variable length tandem repeats, single nucleotide mutations, or a combination thereof.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test tracks single nucleotide mutations.</p>  <p>Source: https://foresight-dx.com/partnership</p>
<p>5. The method of claim 1, wherein said sequences encoding genes with known biomedically interpretable variants comprise a plurality of sequences encoding genes associated with cancer.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test tracks single nucleotide mutations that are in genes with known biomedically interpretable variants, specifically, oncogenic and clinically relevant SNVs.</p>

'033 Patent Claim Language	Infringement Support
	 <p>Source: https://foresight-dx.com/partnership</p>
<p>6. The method of claim 1, further comprising identifying the presence or absence of said plurality of polymorphisms in said nucleic acid sample.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test issues a report regarding the identification the presence or absence of the detected PVs in the second nucleic acid sample obtained from plasma. For example, Kurtz at Extended Fig. 10d shows the tracking and identification of the presence or absence of the PVs in subsequently obtained samples.</p>

'033 Patent Claim Language	Infringement Support																																					
	<div><p>d</p><table><thead><tr><th rowspan="2">Case</th><th rowspan="2">Stage</th><th rowspan="2">No. of PVs Tracked</th><th colspan="2">Time of Diagnosis</th></tr><tr><th>Before Diagnosis</th><th>After Diagnosis</th></tr></thead><tbody><tr><td>BRCA001</td><td>IIIB</td><td>14</td><td>Not detected</td><td>PhasED-Seq detected</td></tr><tr><td>LUP502</td><td>IB</td><td>116</td><td>Not detected</td><td>PhasED-Seq detected</td></tr><tr><td>LUP503</td><td>IA</td><td>223</td><td>Not detected</td><td>PhasED-Seq detected</td></tr><tr><td>LUP649</td><td>IB</td><td>120</td><td>Not detected</td><td>PhasED-Seq detected</td></tr><tr><td>LUP831</td><td>IIIB</td><td>82</td><td>Not detected</td><td>PhasED-Seq detected</td></tr><tr><td>LUP814</td><td>IIIB</td><td>622</td><td>Not detected</td><td>PhasED-Seq detected</td></tr></tbody></table><p>Control Samples</p><p>not detected PhasED-Seq detected false positive PhasED-Seq detected CAPP-Seq not detected</p></div> <p>Source: Kurtz, Extended Fig. 10d.</p>	Case	Stage	No. of PVs Tracked	Time of Diagnosis		Before Diagnosis	After Diagnosis	BRCA001	IIIB	14	Not detected	PhasED-Seq detected	LUP502	IB	116	Not detected	PhasED-Seq detected	LUP503	IA	223	Not detected	PhasED-Seq detected	LUP649	IB	120	Not detected	PhasED-Seq detected	LUP831	IIIB	82	Not detected	PhasED-Seq detected	LUP814	IIIB	622	Not detected	PhasED-Seq detected
Case	Stage				No. of PVs Tracked	Time of Diagnosis																																
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LUP831	IIIB	82	Not detected	PhasED-Seq detected																																		
LUP814	IIIB	622	Not detected	PhasED-Seq detected																																		
7. The method of claim 2, wherein said identifying comprises observing an allele frequency of said plurality of polymorphisms.	<p>The Foresight Diagnostics Solid Tumor Recurrence test calculates the variant allele fraction (VAF) for the observed phased variants detected in the sample. For example, the Supplementary Methods section of Kurtz describes the procedure for the “Identification of phased variants and allelic quantitation.” Kurtz states “[t]o calculate the VAF of each PV, we calculated a numerator representing the number of DNA molecules containing a PV of interest over a denominator representing the total number of DNA molecules that covered the genomic region of interest. That is, the numerator is simply the total number of deduplicated read pairs that contain a given PV while the denominator is the number of read-pairs that span the genomic locus of a given PV.”</p> <p>Source: Kurtz, Supplementary Methods at 8.</p>																																					
9. The method of claim 1, wherein said	<p>The plurality of capture probes are conjugated to beads:</p>																																					

'033 Patent Claim Language	Infringement Support
<p>plurality of capture probes are conjugated to beads.</p>	 <p>The diagram, labeled 'b', illustrates a personalized medicine workflow. It begins with a red human figure. A horizontal timeline shows 'Diagnosis of malignancy' (black dot), 'Treatment' (yellow bar), and 'Subsequent TIME POINT' (black dot). Below 'Diagnosis of malignancy', two DNA samples are shown: 'Germline DNA' (red test tube) and 'Tumor biopsy DNA' (blue test tube). Below 'Subsequent TIME POINT', 'Plasma DNA' is shown (red test tube). The workflow proceeds through several steps: 'I-seq' (indicated by a blue arrow), 'WGS' (Whole Genome Sequencing, indicated by a yellow arrow), 'PV discovery' (Pathogen/Viral discovery, indicated by a yellow arrow), and 'Personalized selector design' (indicated by a yellow arrow). The 'Personalized selector design' step is circled in red and includes a small 'B' icon. The workflow then moves to 'Personalized selector sequencing' (indicated by a green arrow), which is also circled in red and includes a small 'B' icon. Finally, the process concludes with 'Personalized PV monitoring' (indicated by a green arrow).</p> <p>Source: Kurtz, Fig. 7b</p>
<p>11. The method of claim 1, wherein said nucleic acid sample obtained from said individual is from a body fluid, cell, skin, tissue, organ, or combination thereof.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence tests utilizes samples isolated from an individual's germline DNA, tumor biopsy DNA, and plasma DNA.</p>

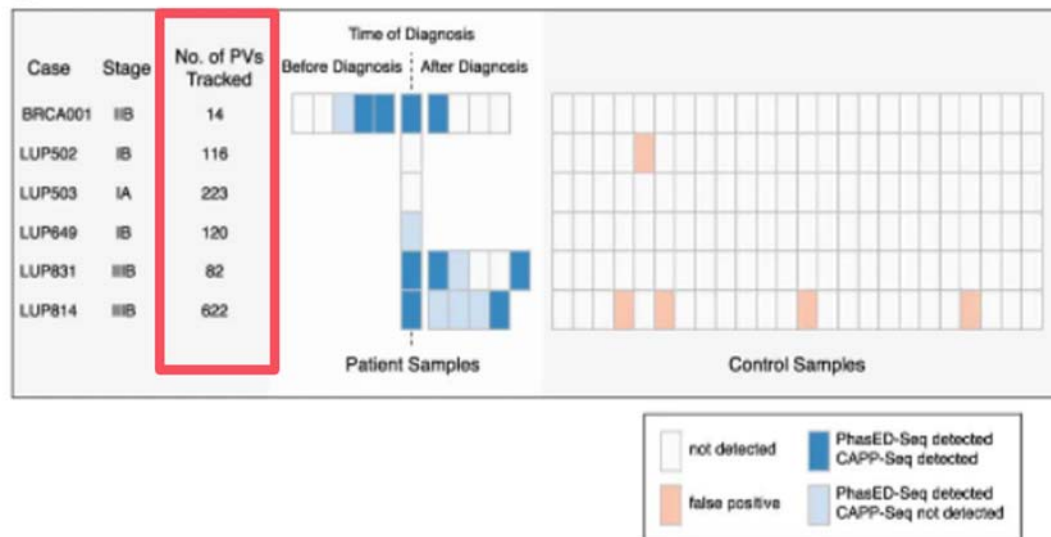
'033 Patent Claim Language	Infringement Support
	 <p>The diagram, labeled 'b', illustrates a clinical workflow. It begins with a red human figure. A horizontal timeline shows 'Diagnosis of malignancy' (black dot), 'Treatment' (orange bar), and 'Subsequent TIME POINT' (black dot). Below 'Diagnosis of malignancy', two DNA samples are shown: 'Germline DNA' (represented by a test tube) and 'Tumor biopsy DNA' (represented by a cluster of cells). Below 'Subsequent TIME POINT', 'Plasma DNA' is shown (represented by a test tube). A red circle highlights the 'Plasma DNA' sample. Arrows indicate the flow of information: from 'Germline DNA' and 'Tumor biopsy DNA' through 'I-seq' and 'WGS' to 'PV discovery', then to 'Personalized selector design' (represented by a DNA helix with a 'B' marker). From 'Plasma DNA', an arrow leads to 'Personalized selector sequencing' (represented by a DNA helix with a 'B' marker), which then leads to 'Personalized PV monitoring'.</p> <p>Source: Kurtz, Fig. 7b</p>
12. The method of claim 11, wherein said body fluid is blood plasma.	The Foresight Diagnostics Solid Tumor Recurrence tests utilizes samples isolated from an individual's germline DNA, tumor biopsy DNA, and plasma DNA.

'033 Patent Claim Language	Infringement Support
	 <p>Source: Kurtz, Fig. 7b</p>
<p>13. The method of claim 12, wherein said plasma sample is obtained from said individual at a first time point, and further comprising, subsequent to (c), using said capture probes to generate an additional subset of nucleic acid molecules from an additional nucleic acid sample isolated from an additional plasma sample obtained from said individual at an additional time point different from said first time point.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence test repeats the sequencing assay performed multiple times over time. For example, Kurtz at Extended Fig. 10d shows the tracking and identification of the presence or absence of the PVs in subsequently obtained samples.</p>

'033 Patent Claim Language

Infringement Support

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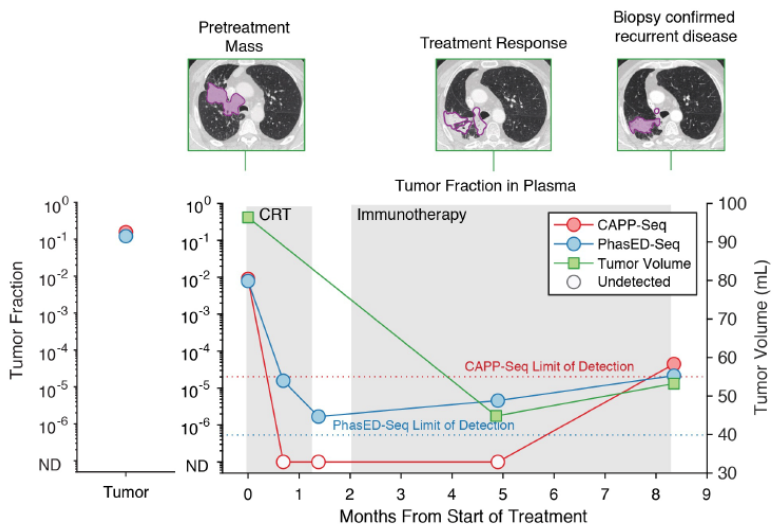


Source: Kurtz, Extended Fig. 10d.

The results of the additional tracking and whether the PVs were observed or not in the subsequently obtained plasma sample may be reported in a biomedical report.

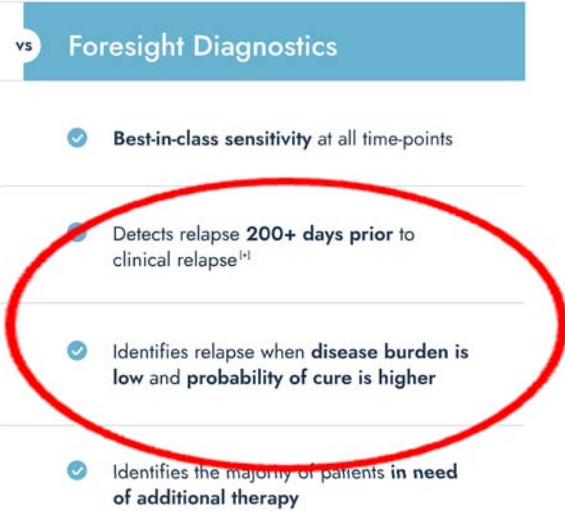
'033 Patent Claim Language

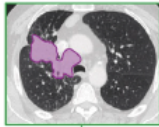
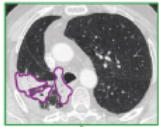
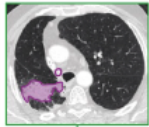
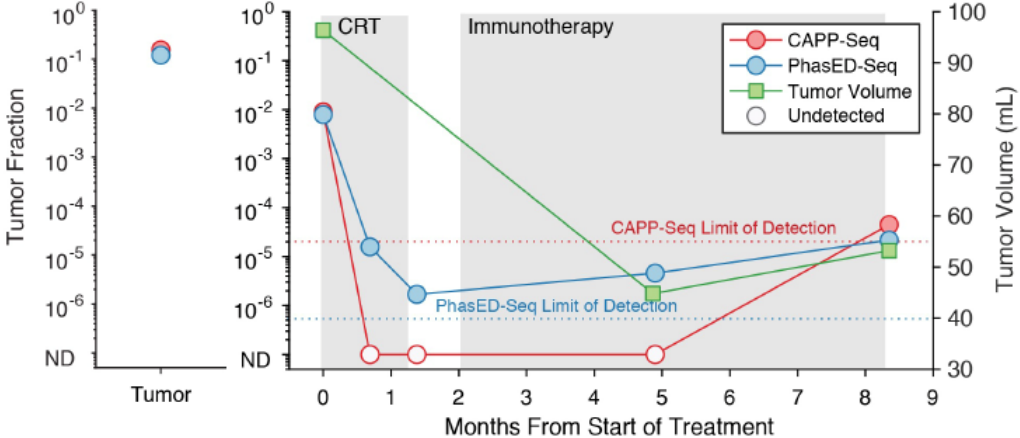
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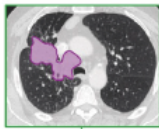
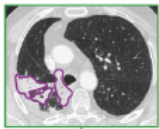
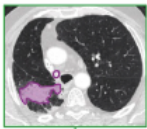
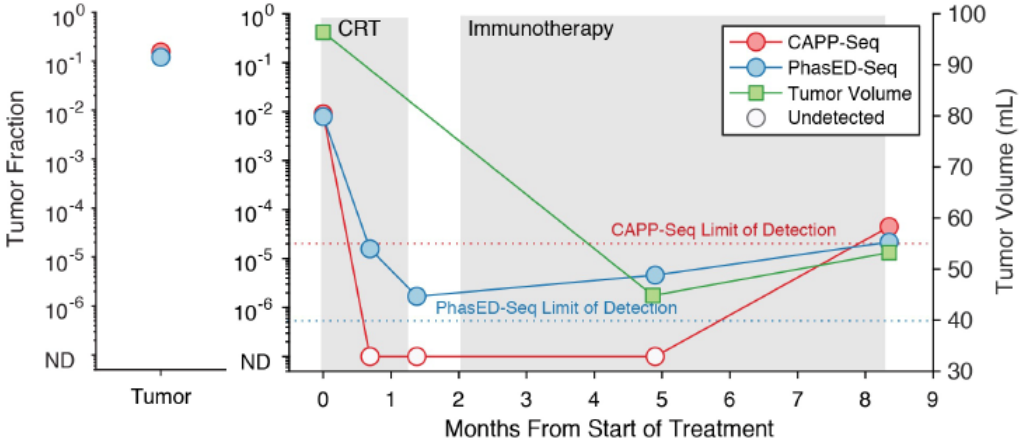


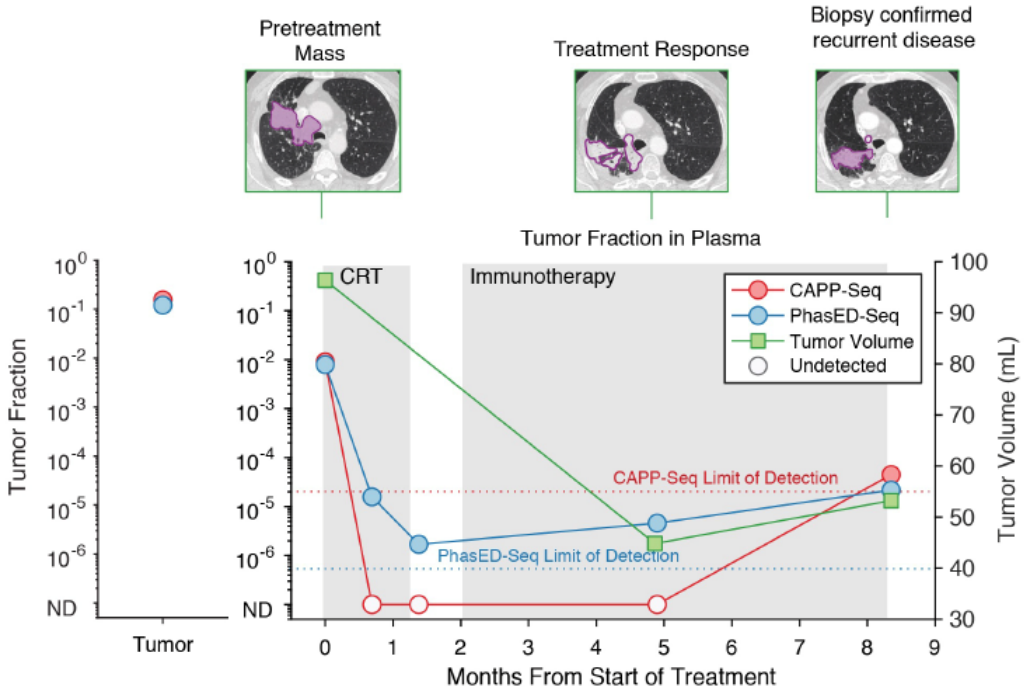
Source: ASCO Meeting 2021: Abstract #8518: Leveraging phased variants for personalized minimal residual disease detection in localized non-small cell lung cancer, David M. Kurtz, et al. (hereinafter "Kurtz Poster," attached hereto as Exhibit K).

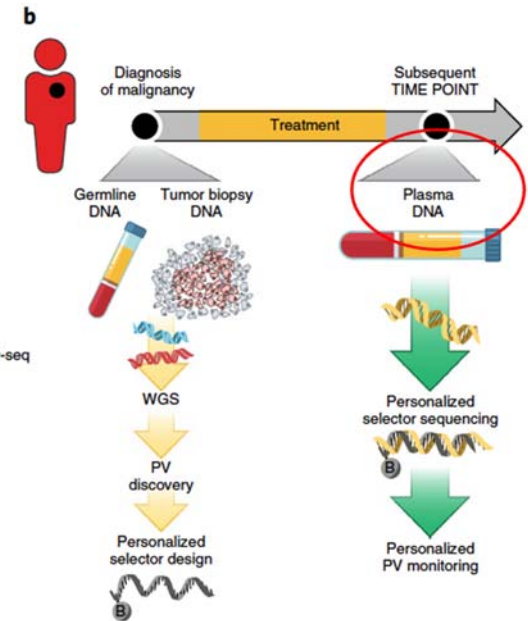
Additionally, the Foresight website indicates the use of time-based reporting and monitoring:

'033 Patent Claim Language	Infringement Support
	 <p>Source: https://foresight-dx.com/technology</p>
<p>14. The method of claim 13, wherein said first time point and said additional time point are at least 1 week apart, or more.</p>	<p>The Foresight Diagnostic Solid Tumor Recurrence test applies the plasma testing at multiple time points that are at least one week apart or more. For example, the Kurtz Poster shows detection of ctDNA in plasma by PhasED-Seq at multiple timepoints up to 9 months after the start of treatment.</p>

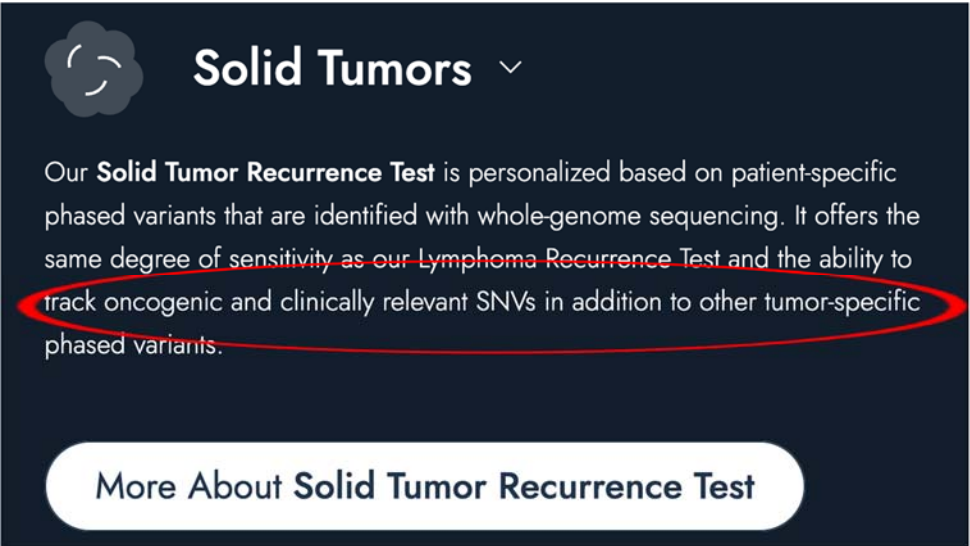
'033 Patent Claim Language	Infringement Support																								
	<div><div><div><div>Pretreatment Mass</div></div><div>Treatment Response</div></div><div>Biopsy confirmed recurrent disease</div></div> <div><p>Tumor Fraction in Plasma</p><table border="1"><caption>Approximate data points from the graph</caption><thead><tr><th>Months From Start of Treatment</th><th>CAPP-Seq (Tumor Fraction)</th><th>PhasED-Seq (Tumor Fraction)</th><th>Tumor Volume (mL)</th></tr></thead><tbody><tr><td>0</td><td>~10⁻¹</td><td>~10⁻¹</td><td>~95</td></tr><tr><td>1</td><td>ND</td><td>~10⁻⁴</td><td>~85</td></tr><tr><td>2</td><td>ND</td><td>~10⁻⁵</td><td>~75</td></tr><tr><td>5</td><td>ND</td><td>~10⁻⁵</td><td>~45</td></tr><tr><td>8</td><td>~10⁻⁴</td><td>~10⁻⁴</td><td>~55</td></tr></tbody></table></div> <p>Source: Kurtz Poster</p>	Months From Start of Treatment	CAPP-Seq (Tumor Fraction)	PhasED-Seq (Tumor Fraction)	Tumor Volume (mL)	0	~10 ⁻¹	~10 ⁻¹	~95	1	ND	~10 ⁻⁴	~85	2	ND	~10 ⁻⁵	~75	5	ND	~10 ⁻⁵	~45	8	~10 ⁻⁴	~10 ⁻⁴	~55
Months From Start of Treatment	CAPP-Seq (Tumor Fraction)	PhasED-Seq (Tumor Fraction)	Tumor Volume (mL)																						
0	~10 ⁻¹	~10 ⁻¹	~95																						
1	ND	~10 ⁻⁴	~85																						
2	ND	~10 ⁻⁵	~75																						
5	ND	~10 ⁻⁵	~45																						
8	~10 ⁻⁴	~10 ⁻⁴	~55																						
15. The method of claim 13, wherein said first time point and said additional time point are at least 1 month apart, or more.	<p>The Foresight Diagnostic Solid Tumor Recurrence test applies the plasma testing at multiple time points that are at least one month apart or more. For example, the Kurtz Poster shows detection of ctDNA in plasma by PhasED-Seq at multiple time points up to 9 months after the start of treatment.</p>																								

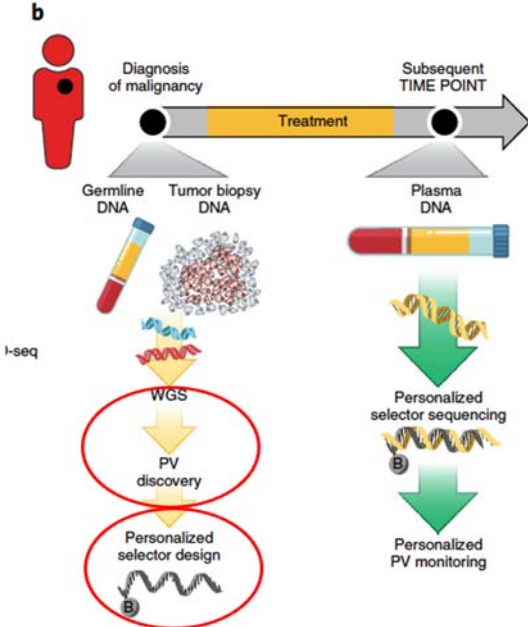
'033 Patent Claim Language	Infringement Support																								
	<div><div><div><p>Pretreatment Mass</p></div><div><p>Treatment Response</p></div><div><p>Biopsy confirmed recurrent disease</p></div></div><div><p>Tumor Fraction in Plasma</p><table border="1"><caption>Approximate data points from the graph</caption><thead><tr><th>Months From Start of Treatment</th><th>CAPP-Seq (Tumor Fraction)</th><th>PhasED-Seq (Tumor Fraction)</th><th>Tumor Volume (mL)</th></tr></thead><tbody><tr><td>0</td><td>~0.1</td><td>~0.1</td><td>~95</td></tr><tr><td>1</td><td>ND</td><td>~10⁻⁵</td><td>~85</td></tr><tr><td>2</td><td>ND</td><td>ND</td><td>~75</td></tr><tr><td>5</td><td>ND</td><td>ND</td><td>~45</td></tr><tr><td>8</td><td>~10^{-4.5}</td><td>~10⁻⁵</td><td>~55</td></tr></tbody></table></div></div> <p>Source: Kurtz Poster.</p>	Months From Start of Treatment	CAPP-Seq (Tumor Fraction)	PhasED-Seq (Tumor Fraction)	Tumor Volume (mL)	0	~0.1	~0.1	~95	1	ND	~10 ⁻⁵	~85	2	ND	ND	~75	5	ND	ND	~45	8	~10 ^{-4.5}	~10 ⁻⁵	~55
Months From Start of Treatment	CAPP-Seq (Tumor Fraction)	PhasED-Seq (Tumor Fraction)	Tumor Volume (mL)																						
0	~0.1	~0.1	~95																						
1	ND	~10 ⁻⁵	~85																						
2	ND	ND	~75																						
5	ND	ND	~45																						
8	~10 ^{-4.5}	~10 ⁻⁵	~55																						
16. The method of claim 13, wherein said additional time point is later than said first time point.	The Foresight Diagnostics Solid Tumor Recurrence test conducts a second sequencing assay on the second subset of nucleic acids generated from the plasma DNA sample obtained at subsequent times.																								

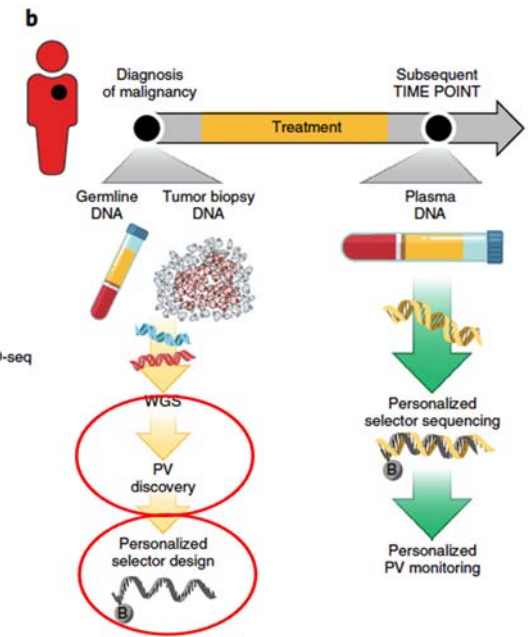
'033 Patent Claim Language	Infringement Support
	 <p>Source: Kurtz Poster.</p>
<p>19. The method of claim 1, wherein said subsequently obtained biological sample is a plasma sample.</p>	<p>The Foresight Diagnostics Solid Tumor Recurrence tests utilizes samples isolated from an individual's germline DNA, tumor biopsy DNA, and plasma DNA.</p>

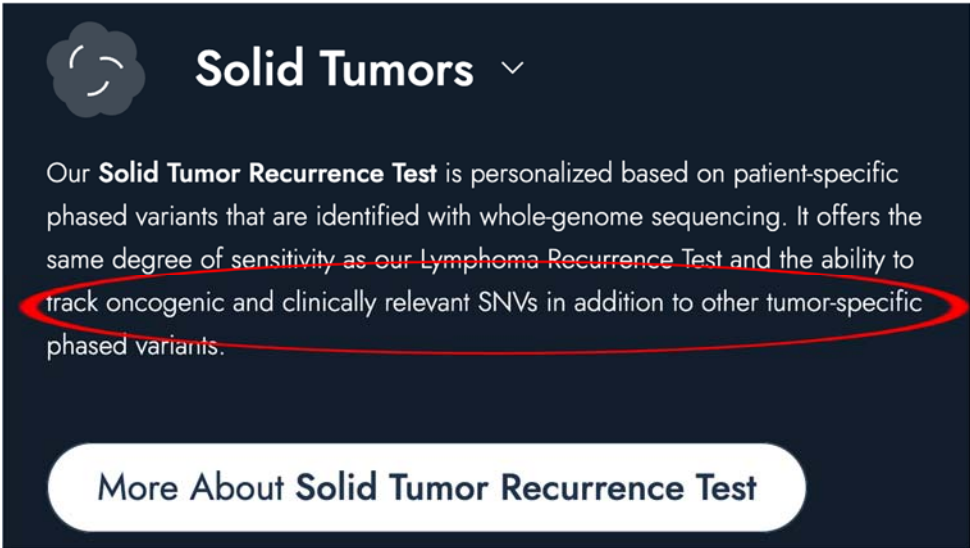
'033 Patent Claim Language	Infringement Support
	 <p>The diagram, labeled 'b', illustrates a clinical workflow. It begins with a patient (red figure) undergoing 'Diagnosis of malignancy'. This leads to 'Germline DNA' (represented by a test tube) and 'Tumor biopsy DNA' (represented by a cluster of cells). These samples undergo 'I-seq' and 'WGS' (Whole Genome Sequencing), followed by 'PV discovery' (Pathogenic Variant discovery) and 'Personalized selector design' (resulting in a DNA probe with a 'B' marker). A 'Treatment' arrow leads to a 'Subsequent TIME POINT'. At this point, 'Plasma DNA' is collected (represented by a test tube) and undergoes 'Personalized selector sequencing' (resulting in a DNA probe with a 'B' marker) and 'Personalized PV monitoring'.</p> <p>Source: Kurtz, Fig. 7b</p>
<p>21. The method of claim 1, wherein said one or more databases of polymorphisms comprises a biomedical database.</p>	<p>The database of polymorphisms used in the Foresight Diagnostics Solid Tumor Recurrence test is biomedical database:</p>

'033 Patent Claim Language	Infringement Support
	<p>b</p> <p>Source: Kurtz, Fig. 7b</p> <p>The Foresight Diagnostics Solid Tumor Recurrence test tracks SNVs from a biomedical database as well:</p>

'033 Patent Claim Language	Infringement Support
	 <p>Source: https://foresight-dx.com/partnership</p>
<p>22. The method of claim 1, wherein said one or more polymorphisms are observed in a population of a single sample.</p>	<p>The polymorphisms in the Foresight Diagnostics Solid Tumor Recurrence test are observed in a population of a single sample:</p>

'033 Patent Claim Language	Infringement Support
	 <p>The diagram, labeled 'b', illustrates a clinical workflow. It begins with a red human figure. A horizontal timeline shows 'Diagnosis of malignancy' (black dot), 'Treatment' (orange bar), and 'Subsequent TIME POINT' (black dot). Below 'Diagnosis of malignancy', 'Germline DNA' (test tube) and 'Tumor biopsy DNA' (cell cluster) are shown. Below 'Subsequent TIME POINT', 'Plasma DNA' (test tube) is shown. Arrows lead from the DNA samples to sequencing steps: 'I-seq' (blue arrow) and 'WGS' (yellow arrow) lead to 'PV discovery' (circled in red). 'WGS' also leads to 'Personalized selector design' (circled in red). 'Plasma DNA' leads to 'Personalized selector sequencing' (green arrow) and then 'Personalized PV monitoring' (green arrow). A small 'B' in a circle is shown near the sequencing steps.</p> <p>Source: Kurtz, Fig. 7b</p>
<p>23. The method of claim 1, wherein said plurality of polymorphisms are based on or extracted from said one or more databases of polymorphisms and observed in said population, wherein said population comprises a plurality of samples</p>	<p>The polymorphisms in the Foresight Diagnostics Solid Tumor Recurrence test are based on or extracted from databases of polymorphisms and observed in a population of a plurality of samples:</p>

'033 Patent Claim Language	Infringement Support						
	<div><p>b</p><p>Source: Kurtz, Fig. 7b</p><table><tr><td>PhasED-Seq (Foresight Diagnostics)</td><td>Hybrid capture-based NGS</td><td>PVs, SNVs</td><td>Baseline: tumor or plasma MRD/monitoring: plasma</td><td>Tumor-informed</td><td>< 0.0001% TF</td></tr></table><p>Chen K et al., MolDiag&Ther 2021</p><p>49</p><p>Source: BloodPac annual meeting slides (BloodPac slides, attached hereto as Exhibit L); Chen, et al., Commercial ctDNA Assays for Minimal Residual Disease Detection of Solid Tumors, MolDiag&Ther (2021) at Table 1 (hereinafter “Chen,” attached hereto as Exhibit M).</p><p>In addition, the Foresight Diagnostics Solid Tumor Recurrence test tracks clinically relevant polymorphisms that are in genes with known biomedically interpretable</p></div>	PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF
PhasED-Seq (Foresight Diagnostics)	Hybrid capture-based NGS	PVs, SNVs	Baseline: tumor or plasma MRD/monitoring: plasma	Tumor-informed	< 0.0001% TF		

'033 Patent Claim Language	Infringement Support
	<p>variants, wherein said plurality of polymorphisms are based on or extracted from one or more databases of polymorphisms, and are observed in a population of one or more samples:</p> <div data-bbox="760 399 1724 943"><p>Our Solid Tumor Recurrence Test is personalized based on patient-specific phased variants that are identified with whole-genome sequencing. It offers the same degree of sensitivity as our Lymphoma Recurrence Test and the ability to track oncogenic and clinically relevant SNVs in addition to other tumor-specific phased variants.</p><p>More About Solid Tumor Recurrence Test</p></div> <p>Source: https://foresight-dx.com/partnership</p>