WEBVTT

NOTE duration: ”00:21:05.493”

NOTE Confidence: 0.9501953

00:00:00.240 --> 00:00:01.760 Hi. My name is Anne

NOTE Confidence: 0.9501953

00:00:01.760 --> 00:00:04.160 Haberman. I'm the scientific director

NOTE Confidence: 0.9501953

00:00:04.160 --> 00:00:05.859 of the flow cytometry facility.

NOTE Confidence: 0.93682176

00:00:06.160 --> 00:00:07.919 I co direct with Leslie

NOTE Confidence: 0.93682176

00:00:07.919 --> 00:00:10.639 Devine who's, also attending this

NOTE Confidence: 0.93682176

00:00:10.639 --> 00:00:11.860 presentation today.

NOTE Confidence: 0.9951172

00:00:14.960 --> 00:00:15.460 As

NOTE Confidence: 0.9862793

00:00:16.105 --> 00:00:17.785 most of you know, flow

NOTE Confidence: 0.9862793

00:00:17.785 --> 00:00:19.885 cytometry is a technique that,

NOTE Confidence: 0.9660269

00:00:20.664 --> 00:00:22.744 allows every object to be

NOTE Confidence: 0.9660269

00:00:22.744 --> 00:00:24.845 interrogated for fluorescence and light

NOTE Confidence: 0.9660269

00:00:24.904 --> 00:00:26.445 scattering properties, including,

NOTE Confidence: 0.945459

00:00:27.064 --> 00:00:28.525 some that are non fluorescent.

NOTE Confidence: 0.97871906

00:00:29.440 --> 00:00:31.440 Using this technique, the marker

NOTE Confidence: 0.97871906

00:00:31.440 --> 00:00:31.940 expression

NOTE Confidence: 0.7286784

00:00:32.560 --> 00:00:34.180 of, many, protonacious

NOTE Confidence: 0.9889207

00:00:34.560 --> 00:00:37.300 antigens typically detected with fluorescently

NOTE Confidence: 0.9889207

00:00:37.360 --> 00:00:38.580 conjugated antibodies

NOTE Confidence: 0.9379476

00:00:38.960 --> 00:00:40.479 can be assessed and very

NOTE Confidence: 0.9379476

00:00:40.479 --> 00:00:40.979 precisely,

NOTE Confidence: 0.9876302

00:00:41.600 --> 00:00:43.220 quantified for statistics.

NOTE Confidence: 0.85335284

00:00:46.394 --> 00:00:47.695 This is not showing correctly.

NOTE Confidence: 0.85335284

00:00:47.754 --> 00:00:48.254 Sorry.

NOTE Confidence: 0.92992

00:00:50.315 --> 00:00:51.754 So, shown here is just

NOTE Confidence: 0.92992

00:00:51.754 --> 00:00:53.754 some very simple gating of,

NOTE Confidence: 0.92992

00:00:53.995 --> 00:00:55.195 just a small number of

NOTE Confidence: 0.92992

00:00:55.195 --> 00:00:57.594 parameters from, twenty four color

NOTE Confidence: 0.92992

00:00:57.594 --> 00:00:58.094 panel,

NOTE Confidence: 0.99003905

00:00:58.440 --> 00:01:00.540 that is easily obtained on,

NOTE Confidence: 0.9533081

00:01:01.080 --> 00:01:02.280 a number of our,

NOTE Confidence: 0.91031903

00:01:02.600 --> 00:01:04.060 analytic flow cytometers.

NOTE Confidence: 0.9626465

00:01:06.840 --> 00:01:08.780 In addition to analysis, fluorescently

NOTE Confidence: 0.9626465

00:01:08.840 --> 00:01:09.959 tagged cells can also be

NOTE Confidence: 0.9626465

00:01:09.959 --> 00:01:11.740 sorted and collected for downstream

NOTE Confidence: 0.9626465

00:01:11.880 --> 00:01:12.380 applications,

NOTE Confidence: 0.9938151

00:01:13.025 --> 00:01:14.725 such as cell culture assays,

NOTE Confidence: 0.8287109

00:01:15.025 --> 00:01:16.965 DNA or RNA seek, including

NOTE Confidence: 0.9588623

00:01:17.345 --> 00:01:18.805 single cell RNA seek,

NOTE Confidence: 0.88549805

00:01:19.265 --> 00:01:21.365 adoptive cell transfers for subsequent

NOTE Confidence: 0.88549805

00:01:21.425 --> 00:01:22.565 in vivo studies.

NOTE Confidence: 0.9812899

00:01:23.505 --> 00:01:24.944 Really, anything that you can

NOTE Confidence: 0.9812899

00:01:24.944 --> 00:01:25.985 imagine in which you would

NOTE Confidence: 0.9812899

00:01:25.985 --> 00:01:26.485 need

NOTE Confidence: 0.8483887

00:01:26.819 --> 00:01:27.260 purified,

NOTE Confidence: 0.9992676

00:01:27.700 --> 00:01:29.640 cells with great accuracy

NOTE Confidence: 0.9560547

00:01:30.100 --> 00:01:30.920 on its,

NOTE Confidence: 0.99975586

00:01:31.459 --> 00:01:32.440 protein expression.

NOTE Confidence: 0.99057615

00:01:33.620 --> 00:01:35.319 Cells can be collected into,

NOTE Confidence: 0.99902344

00:01:35.620 --> 00:01:36.900 a variety of different types

NOTE Confidence: 0.99902344

00:01:36.900 --> 00:01:37.640 of tubes

NOTE Confidence: 0.9845703

00:01:37.940 --> 00:01:40.055 or index sorted into plates

NOTE Confidence: 0.9630127

00:01:40.595 --> 00:01:41.555 based on,

NOTE Confidence: 0.9932556

00:01:41.955 --> 00:01:44.115 intensity of expression of your

NOTE Confidence: 0.9932556

00:01:44.115 --> 00:01:45.334 markers of interest.

NOTE Confidence: 0.981486

00:01:45.635 --> 00:01:47.075 And this latter technique can

NOTE Confidence: 0.981486

00:01:47.075 --> 00:01:48.695 be helpful for a post

NOTE Confidence: 0.981486

00:01:48.915 --> 00:01:50.055 culture retrospective

NOTE Confidence: 1

00:01:50.355 --> 00:01:50.855 analysis

NOTE Confidence: 0.9222717

00:01:51.315 --> 00:01:52.755 of an in vitro assay,

NOTE Confidence: 0.9222717

00:01:52.755 --> 00:01:53.735 say for example.

NOTE Confidence: 0.96176755

00:01:55.690 --> 00:01:57.390 Here's the list of equipment,

NOTE Confidence: 0.9583333

00:01:57.690 --> 00:01:58.830 that is distributed

NOTE Confidence: 0.895874

00:01:59.370 --> 00:02:00.350 across campus.

NOTE Confidence: 0.890625

00:02:00.970 --> 00:02:01.710 In addition,

NOTE Confidence: 0.7993164

00:02:02.570 --> 00:02:03.070 to,

NOTE Confidence: 0.7949219

00:02:03.770 --> 00:02:04.270 traditional,

NOTE Confidence: 0.9643367

00:02:04.890 --> 00:02:06.650 analytic flow cytometers and cell

NOTE Confidence: 0.9643367

00:02:06.650 --> 00:02:08.570 sorters that I'll describe more

NOTE Confidence: 0.9643367

00:02:08.570 --> 00:02:09.315 in a minute,

NOTE Confidence: 0.78149414

00:02:09.875 --> 00:02:10.595 we also,

NOTE Confidence: 0.98339844

00:02:12.035 --> 00:02:13.635 can support the use of,

NOTE Confidence: 0.8920593

00:02:13.955 --> 00:02:15.715 imaging flow cytometry on an

NOTE Confidence: 0.8920593

00:02:15.715 --> 00:02:16.935 AMNES image stream,

NOTE Confidence: 0.96720374

00:02:17.475 --> 00:02:18.294 flow cytometer,

NOTE Confidence: 0.9301758

00:02:18.755 --> 00:02:19.255 and,

NOTE Confidence: 0.98642576

00:02:19.875 --> 00:02:22.135 also support Luminex style assays.

NOTE Confidence: 0.9650391

00:02:23.350 --> 00:02:25.770 We're providing service to really,

NOTE Confidence: 0.97360027

00:02:26.310 --> 00:02:27.510 a large number of labs

NOTE Confidence: 0.97360027

00:02:27.510 --> 00:02:29.110 in nearly every department on

NOTE Confidence: 0.97360027

00:02:29.110 --> 00:02:30.889 the Yale School of Medicine

NOTE Confidence: 0.8808594

00:02:31.430 --> 00:02:31.930 campus.

NOTE Confidence: 0.97552264

00:02:32.710 --> 00:02:34.630 And, having been around for

NOTE Confidence: 0.97552264

00:02:34.630 --> 00:02:36.310 quite a while since, two

NOTE Confidence: 0.97552264

00:02:36.310 --> 00:02:37.835 thousand seven, we have really

NOTE Confidence: 0.97552264

00:02:37.835 --> 00:02:40.155 broad experience supporting cytometry of

NOTE Confidence: 0.97552264

00:02:40.155 --> 00:02:41.514 all types of samples and

NOTE Confidence: 0.97552264

00:02:41.514 --> 00:02:42.334 really every

NOTE Confidence: 0.92158645

00:02:42.715 --> 00:02:44.794 object or or cell size,

NOTE Confidence: 0.92158645

00:02:44.794 --> 00:02:46.315 including the very small, like,

NOTE Confidence: 0.92158645

00:02:46.315 --> 00:02:46.815 bacteria,

NOTE Confidence: 0.9709066

00:02:47.675 --> 00:02:48.735 or, extracellular

NOTE Confidence: 0.96118164

00:02:49.194 --> 00:02:49.694 vesicles,

NOTE Confidence: 0.9975586

00:02:50.475 --> 00:02:52.415 to the very large.

NOTE Confidence: 0.9567871

00:02:53.730 --> 00:02:55.010 We have support for both

NOTE Confidence: 0.9567871

00:02:55.010 --> 00:02:57.110 the independent operation of instruments

NOTE Confidence: 0.9015842

00:02:57.570 --> 00:02:58.690 or a fee for service

NOTE Confidence: 0.9015842

00:02:58.690 --> 00:03:00.710 options with advanced notice.

NOTE Confidence: 0.9747009

00:03:01.250 --> 00:03:02.389 And I'd like to mention,

NOTE Confidence: 0.9747009

00:03:02.610 --> 00:03:04.230 YCC members receive

NOTE Confidence: 0.9668579

00:03:04.610 --> 00:03:06.375 a ten percent co pay

NOTE Confidence: 0.9668579

00:03:06.435 --> 00:03:07.335 on our fees,

NOTE Confidence: 0.98657227

00:03:07.715 --> 00:03:09.715 which are, a net zero

NOTE Confidence: 0.98657227

00:03:09.715 --> 00:03:10.615 cost recovery,

NOTE Confidence: 1

00:03:11.795 --> 00:03:12.855 scheduling approach.

NOTE Confidence: 0.9995117

00:03:14.115 --> 00:03:16.355 The instruments are distributed across

NOTE Confidence: 0.9995117

00:03:16.355 --> 00:03:16.855 campus.

NOTE Confidence: 0.9745239

00:03:17.555 --> 00:03:19.315 We have two major hubs,

NOTE Confidence: 0.9745239

00:03:19.315 --> 00:03:20.275 and that would be in

NOTE Confidence: 0.9745239

00:03:20.275 --> 00:03:21.930 three hundred George Street and

NOTE Confidence: 0.9745239

00:03:21.930 --> 00:03:23.629 also in the TAC building,

NOTE Confidence: 0.90790665

00:03:24.090 --> 00:03:24.970 as well as a self

NOTE Confidence: 0.90790665

00:03:24.970 --> 00:03:26.810 sorter inside the biosafety level

NOTE Confidence: 0.90790665

00:03:26.810 --> 00:03:28.269 three facility in LEPH,

NOTE Confidence: 0.9055176

00:03:29.290 --> 00:03:31.450 and a sorter and, an

NOTE Confidence: 0.9055176

00:03:31.450 --> 00:03:31.950 analytic,

NOTE Confidence: 0.8273926

00:03:32.410 --> 00:03:32.910 Fortessa

NOTE Confidence: 0.9899699

00:03:33.450 --> 00:03:34.989 in the Amistad building.

NOTE Confidence: 0.9887952

00:03:37.955 --> 00:03:39.315 We have, quite a few

NOTE Confidence: 0.9887952

00:03:39.315 --> 00:03:40.915 staff who are available to

NOTE Confidence: 0.9887952

00:03:40.915 --> 00:03:42.915 guide, train, or assist you

NOTE Confidence: 0.9887952

00:03:42.915 --> 00:03:44.855 really in all elements

NOTE Confidence: 0.92041016

00:03:45.235 --> 00:03:46.375 of data acquisition,

NOTE Confidence: 0.99975586

00:03:46.995 --> 00:03:47.975 or analysis.

NOTE Confidence: 0.9968262

00:03:49.200 --> 00:03:50.560 You may have some very

NOTE Confidence: 0.9968262

00:03:50.560 --> 00:03:51.060 fundamental,

NOTE Confidence: 0.9675293

00:03:51.600 --> 00:03:52.660 de novo level,

NOTE Confidence: 0.9394531

00:03:53.280 --> 00:03:53.780 questions,

NOTE Confidence: 0.8924735

00:03:54.640 --> 00:03:56.400 that that we can, assist

NOTE Confidence: 0.8924735

00:03:56.400 --> 00:03:57.060 you with,

NOTE Confidence: 0.9900251

00:03:57.440 --> 00:03:58.880 all the way to very

NOTE Confidence: 0.9900251

00:03:58.880 --> 00:03:59.620 high parameter,

NOTE Confidence: 0.9442857

00:04:00.560 --> 00:04:02.945 clustering approaches similar to the

NOTE Confidence: 0.9442857

00:04:02.945 --> 00:04:04.465 t SNE analysis that you

NOTE Confidence: 0.9442857

00:04:04.465 --> 00:04:05.585 might do with single cell

NOTE Confidence: 0.9442857

00:04:05.585 --> 00:04:06.645 RNA seq.

NOTE Confidence: 0.97392577

00:04:07.905 --> 00:04:09.345 Some of our staff is

NOTE Confidence: 0.97392577

00:04:09.345 --> 00:04:11.265 devoted to just the support

NOTE Confidence: 0.97392577

00:04:11.265 --> 00:04:13.125 of the analytic flow cytometers.

NOTE Confidence: 0.9986049

00:04:13.985 --> 00:04:15.345 But the vast majority of

NOTE Confidence: 0.9986049

00:04:15.345 --> 00:04:15.990 our staff

NOTE Confidence: 0.9680664

00:04:16.310 --> 00:04:18.470 is very cross trained and

NOTE Confidence: 0.9680664

00:04:18.470 --> 00:04:20.330 may primarily spend their time,

NOTE Confidence: 0.90883094

00:04:20.790 --> 00:04:22.390 assisting with self sorting at

NOTE Confidence: 0.90883094

00:04:22.390 --> 00:04:23.130 the instrument,

NOTE Confidence: 0.93618774

00:04:23.750 --> 00:04:25.270 but are are aware of

NOTE Confidence: 0.93618774

00:04:25.270 --> 00:04:26.970 and, and can,

NOTE Confidence: 0.9805298

00:04:27.990 --> 00:04:29.370 help to guide you,

NOTE Confidence: 0.9995117

00:04:29.830 --> 00:04:30.650 to choose

NOTE Confidence: 0.9969238

00:04:31.285 --> 00:04:33.205 the correct analytic instrument that

NOTE Confidence: 0.9969238

00:04:33.205 --> 00:04:35.065 might pair best with their,

NOTE Confidence: 0.9616157

00:04:35.685 --> 00:04:37.925 cell sorter or might, better

NOTE Confidence: 0.9616157

00:04:37.925 --> 00:04:40.505 address your biological questions.

NOTE Confidence: 0.91433376

00:04:42.964 --> 00:04:44.265 Our analytics cytometers,

NOTE Confidence: 0.97914344

00:04:44.885 --> 00:04:46.199 are available for use for

NOTE Confidence: 0.97914344

00:04:46.199 --> 00:04:48.120 independent use, and that's primarily

NOTE Confidence: 0.97914344

00:04:48.120 --> 00:04:49.259 how they are used.

NOTE Confidence: 0.88228935

00:04:49.560 --> 00:04:50.919 Broadly kind of fall into

NOTE Confidence: 0.88228935

00:04:50.919 --> 00:04:51.900 two categories.

NOTE Confidence: 0.9439174

00:04:52.759 --> 00:04:55.000 Those that separate light in

NOTE Confidence: 0.9439174

00:04:55.000 --> 00:04:56.060 a conventional,

NOTE Confidence: 0.873291

00:04:57.160 --> 00:04:57.660 fashion,

NOTE Confidence: 0.9784712

00:04:58.440 --> 00:04:59.400 and that would be a

NOTE Confidence: 0.9784712

00:04:59.400 --> 00:05:01.240 lot of instruments manufactured by

NOTE Confidence: 0.9784712

00:05:01.240 --> 00:05:01.740 BD,

NOTE Confidence: 0.78912354

00:05:02.385 --> 00:05:04.485 and including their numerous symphonies

NOTE Confidence: 0.78912354

00:05:04.545 --> 00:05:06.565 for TESAs, some ELSA twos.

NOTE Confidence: 0.8465495

00:05:07.345 --> 00:05:08.645 And the CytoFlex,

NOTE Confidence: 0.944843

00:05:10.464 --> 00:05:12.085 flow cytometer is very sensitive

NOTE Confidence: 0.944843

00:05:12.145 --> 00:05:14.325 with avalanche detectors and manufactured

NOTE Confidence: 0.944843

00:05:14.544 --> 00:05:15.845 by Beckman Coulter.

NOTE Confidence: 0.9206543

00:05:16.770 --> 00:05:17.510 We also,

NOTE Confidence: 0.96468097

00:05:18.290 --> 00:05:19.830 have two auroras

NOTE Confidence: 0.9301351

00:05:20.290 --> 00:05:22.130 that use, instead a different

NOTE Confidence: 0.9301351

00:05:22.130 --> 00:05:22.630 approach,

NOTE Confidence: 0.967926

00:05:23.810 --> 00:05:25.410 that, would be referred to

NOTE Confidence: 0.967926

00:05:25.410 --> 00:05:26.470 as spectral detection.

NOTE Confidence: 0.8551557

00:05:26.930 --> 00:05:29.330 So, whereas with conventional detection,

NOTE Confidence: 0.8551557

00:05:29.330 --> 00:05:31.089 light is parsed out a

NOTE Confidence: 0.8551557

00:05:31.089 --> 00:05:32.070 little more discreetly,

NOTE Confidence: 0.94866943

00:05:32.745 --> 00:05:34.685 With spectral detection instead,

NOTE Confidence: 0.9800556

00:05:35.145 --> 00:05:36.825 all the light, being emitted

NOTE Confidence: 0.9800556

00:05:36.825 --> 00:05:37.785 off of each of the

NOTE Confidence: 0.9800556

00:05:37.785 --> 00:05:39.165 lasers is collected.

NOTE Confidence: 0.9339097

00:05:40.025 --> 00:05:41.945 And these use, slightly different

NOTE Confidence: 0.9339097

00:05:41.945 --> 00:05:43.785 approaches to distinguishing one of

NOTE Confidence: 0.9339097

00:05:43.785 --> 00:05:45.750 four four four another, but

NOTE Confidence: 0.9339097

00:05:45.750 --> 00:05:46.570 this latter

NOTE Confidence: 0.9963379

00:05:46.950 --> 00:05:48.170 one is more compatible

NOTE Confidence: 0.97594273

00:05:49.029 --> 00:05:50.870 with very large numbers of,

NOTE Confidence: 0.97594273

00:05:51.110 --> 00:05:52.710 of fluorophores being used at

NOTE Confidence: 0.97594273

00:05:52.710 --> 00:05:53.690 the same time.

NOTE Confidence: 0.91765404

00:05:54.470 --> 00:05:55.589 So with the symphony, the

NOTE Confidence: 0.91765404

00:05:55.589 --> 00:05:57.350 Bigfoot, or the Wura, twenty

NOTE Confidence: 0.91765404

00:05:57.350 --> 00:05:59.210 plus colors are easily distinguished.

NOTE Confidence: 0.8856879

00:05:59.964 --> 00:06:01.025 With the aurora,

NOTE Confidence: 0.9364827

00:06:02.605 --> 00:06:04.765 many more could theoretically be

NOTE Confidence: 0.9364827

00:06:04.765 --> 00:06:06.525 detected. And and, and these

NOTE Confidence: 0.9364827

00:06:06.525 --> 00:06:07.485 days, the limit is much

NOTE Confidence: 0.9364827

00:06:07.485 --> 00:06:08.845 more about what you can

NOTE Confidence: 0.9364827

00:06:08.845 --> 00:06:10.525 find commercially pre prepared in

NOTE Confidence: 0.9364827

00:06:10.525 --> 00:06:12.305 the way of distinguishable fluorophores,

NOTE Confidence: 0.83601886

00:06:13.260 --> 00:06:15.040 less so what the instrument

NOTE Confidence: 0.83601886

00:06:15.100 --> 00:06:15.500 can,

NOTE Confidence: 0.9873047

00:06:15.980 --> 00:06:16.480 can

NOTE Confidence: 0.998291

00:06:16.860 --> 00:06:17.839 distinguish itself.

NOTE Confidence: 0.8695761

00:06:19.900 --> 00:06:21.740 I had mentioned the AMNOS

NOTE Confidence: 0.8695761

00:06:21.740 --> 00:06:23.919 Image Stream Imaging Flow Cytometer.

NOTE Confidence: 0.9921653

00:06:24.460 --> 00:06:26.460 This instrument can acquire images

NOTE Confidence: 0.9921653

00:06:26.460 --> 00:06:27.900 of cells that are in

NOTE Confidence: 0.9921653

00:06:27.900 --> 00:06:28.400 suspension.

NOTE Confidence: 0.96240234

00:06:29.255 --> 00:06:30.955 So whereas previously,

NOTE Confidence: 0.95756024

00:06:31.815 --> 00:06:32.935 you might have had to

NOTE Confidence: 0.95756024

00:06:32.935 --> 00:06:35.015 have used, confocal to take

NOTE Confidence: 0.95756024

00:06:35.015 --> 00:06:36.615 images of large numbers of

NOTE Confidence: 0.95756024

00:06:36.615 --> 00:06:38.135 cells on in in order

NOTE Confidence: 0.95756024

00:06:38.135 --> 00:06:38.635 to,

NOTE Confidence: 0.98488545

00:06:39.335 --> 00:06:41.175 then, perform your own image

NOTE Confidence: 0.98488545

00:06:41.175 --> 00:06:43.175 analysis for that quantification of

NOTE Confidence: 0.98488545

00:06:43.175 --> 00:06:43.675 location

NOTE Confidence: 0.96695966

00:06:44.480 --> 00:06:46.480 of the fluorescence within a

NOTE Confidence: 0.96695966

00:06:46.480 --> 00:06:46.980 cell.

NOTE Confidence: 0.9790344

00:06:47.520 --> 00:06:48.400 Now you can make a

NOTE Confidence: 0.9790344

00:06:48.400 --> 00:06:49.460 single cell suspension,

NOTE Confidence: 0.94140625

00:06:50.160 --> 00:06:52.160 and with up to, eight

NOTE Confidence: 0.94140625

00:06:52.160 --> 00:06:53.220 colors now,

NOTE Confidence: 0.9974501

00:06:53.839 --> 00:06:55.680 be able to perform studies

NOTE Confidence: 0.9974501

00:06:55.680 --> 00:06:56.740 that would help you

NOTE Confidence: 0.9367676

00:06:57.040 --> 00:06:58.100 instead distinguish,

NOTE Confidence: 0.99609375

00:06:58.480 --> 00:06:58.980 say

NOTE Confidence: 0.96551514

00:06:59.305 --> 00:07:01.645 surface versus internalized components,

NOTE Confidence: 0.88655597

00:07:02.745 --> 00:07:04.525 refine your cell cycle, mitosis

NOTE Confidence: 0.88655597

00:07:04.824 --> 00:07:06.604 or DNA damage studies,

NOTE Confidence: 0.9437866

00:07:07.544 --> 00:07:09.625 autophagy, cell signaling, cell cell

NOTE Confidence: 0.9437866

00:07:09.625 --> 00:07:10.125 interactions,

NOTE Confidence: 0.99108887

00:07:11.224 --> 00:07:12.264 you know, such as TB

NOTE Confidence: 0.99108887

00:07:12.264 --> 00:07:12.764 interactions,

NOTE Confidence: 0.9934896

00:07:13.465 --> 00:07:15.550 defining the synapse, quantifying what's

NOTE Confidence: 0.9934896

00:07:15.550 --> 00:07:16.530 at the synapse,

NOTE Confidence: 0.94177246

00:07:16.910 --> 00:07:19.150 asymmetric cell division, say, for

NOTE Confidence: 0.94177246

00:07:19.150 --> 00:07:19.650 example.

NOTE Confidence: 0.9538574

00:07:20.110 --> 00:07:21.890 All these things are, possibilities,

NOTE Confidence: 0.99741906

00:07:22.430 --> 00:07:23.630 that can be a real

NOTE Confidence: 0.99741906

00:07:23.630 --> 00:07:24.450 slam dunk,

NOTE Confidence: 0.9580078

00:07:24.910 --> 00:07:25.410 for,

NOTE Confidence: 0.9980469

00:07:26.110 --> 00:07:26.930 other orthogonal

NOTE Confidence: 0.9868164

00:07:27.630 --> 00:07:29.410 assays for a higher impact

NOTE Confidence: 0.9868164

00:07:29.470 --> 00:07:29.970 paper.

NOTE Confidence: 0.9180664

00:07:30.485 --> 00:07:31.945 There's staff support for this,

NOTE Confidence: 0.7671073

00:07:32.325 --> 00:07:33.365 as is everything in the

NOTE Confidence: 0.7671073

00:07:33.365 --> 00:07:34.105 Flow Core,

NOTE Confidence: 0.98498535

00:07:34.485 --> 00:07:36.265 for both the data acquisition

NOTE Confidence: 0.98498535

00:07:36.325 --> 00:07:37.145 and the analysis.

NOTE Confidence: 0.98573524

00:07:37.845 --> 00:07:39.225 We can help to advise

NOTE Confidence: 0.98573524

00:07:39.285 --> 00:07:40.185 you on,

NOTE Confidence: 0.9045817

00:07:41.365 --> 00:07:42.805 what colors would be appropriate

NOTE Confidence: 0.9045817

00:07:42.805 --> 00:07:44.485 for where this elements of

NOTE Confidence: 0.9045817

00:07:44.485 --> 00:07:45.305 sample preparation.

NOTE Confidence: 0.9371582

00:07:46.300 --> 00:07:48.320 There's very intuitive image analysis,

NOTE Confidence: 0.8444824

00:07:50.220 --> 00:07:51.920 including what will soon arrive,

NOTE Confidence: 0.92781574

00:07:52.300 --> 00:07:54.140 a more AI driven wizard

NOTE Confidence: 0.92781574

00:07:54.140 --> 00:07:54.540 if,

NOTE Confidence: 0.89501953

00:07:55.500 --> 00:07:56.780 if that's what you would

NOTE Confidence: 0.89501953

00:07:56.780 --> 00:07:57.280 prefer.

NOTE Confidence: 0.99523926

00:07:58.300 --> 00:08:00.240 That also can incorporate traditional

NOTE Confidence: 0.99523926

00:08:00.300 --> 00:08:01.920 flow cytometry gating

NOTE Confidence: 0.9923096

00:08:02.965 --> 00:08:04.585 as well as applying

NOTE Confidence: 0.9941406

00:08:04.965 --> 00:08:05.465 image

NOTE Confidence: 0.9899089

00:08:05.925 --> 00:08:07.065 masks and features

NOTE Confidence: 0.9924665

00:08:07.444 --> 00:08:08.884 that can also be gated

NOTE Confidence: 0.9924665

00:08:08.884 --> 00:08:09.544 on plots.

NOTE Confidence: 0.9133708

00:08:11.125 --> 00:08:12.485 So I don't really have

NOTE Confidence: 0.9133708

00:08:12.485 --> 00:08:13.925 time to delve much more

NOTE Confidence: 0.9133708

00:08:13.925 --> 00:08:14.985 into this

NOTE Confidence: 0.91011554

00:08:15.365 --> 00:08:16.905 but this is a powerful

NOTE Confidence: 0.91011554

00:08:16.965 --> 00:08:17.465 instrument.

NOTE Confidence: 0.9418267

00:08:19.100 --> 00:08:21.180 And lastly, I'd like to

NOTE Confidence: 0.9418267

00:08:21.180 --> 00:08:23.120 describe other lines of service

NOTE Confidence: 0.9418267

00:08:23.419 --> 00:08:24.540 that are a little more

NOTE Confidence: 0.9418267

00:08:24.540 --> 00:08:25.760 wet bench oriented.

NOTE Confidence: 0.78308105

00:08:26.380 --> 00:08:27.580 Let's say for example with

NOTE Confidence: 0.78308105

00:08:27.580 --> 00:08:28.240 the Luminex,

NOTE Confidence: 0.9125

00:08:29.820 --> 00:08:32.240 we can provide sample preparation,

NOTE Confidence: 1

00:08:33.775 --> 00:08:34.675 data acquisition

NOTE Confidence: 0.91618466

00:08:35.054 --> 00:08:37.054 or analysis or train you

NOTE Confidence: 0.91618466

00:08:37.054 --> 00:08:38.434 to do these things yourself

NOTE Confidence: 0.91618466

00:08:38.495 --> 00:08:39.554 on this instrument.

NOTE Confidence: 0.9846017

00:08:40.575 --> 00:08:42.575 Along these lines of, what

NOTE Confidence: 0.9846017

00:08:42.575 --> 00:08:44.335 had previously been referred to

NOTE Confidence: 0.9846017

00:08:44.335 --> 00:08:45.875 as immune monitoring services

NOTE Confidence: 0.9962158

00:08:46.230 --> 00:08:47.529 includes cryopreservation

NOTE Confidence: 0.9937744

00:08:48.230 --> 00:08:49.990 of human serum or peripheral

NOTE Confidence: 0.9937744

00:08:49.990 --> 00:08:50.490 blood,

NOTE Confidence: 0.9107259

00:08:51.589 --> 00:08:52.649 of human blood,

NOTE Confidence: 0.95564103

00:08:53.350 --> 00:08:54.630 staining of samples for flow

NOTE Confidence: 0.95564103

00:08:54.630 --> 00:08:55.130 cytometry.

NOTE Confidence: 0.99658203

00:08:55.670 --> 00:08:56.950 We can run those same

NOTE Confidence: 0.99658203

00:08:56.950 --> 00:08:58.070 samples for you on a

NOTE Confidence: 0.99658203

00:08:58.070 --> 00:08:59.589 flow cytometer and do the

NOTE Confidence: 0.99658203

00:08:59.589 --> 00:09:01.370 analysis or any fragment

NOTE Confidence: 0.9148763

00:09:02.225 --> 00:09:03.285 subsection of that.

NOTE Confidence: 0.9444214

00:09:03.985 --> 00:09:06.144 It's possible to perform same

NOTE Confidence: 0.9444214

00:09:06.144 --> 00:09:07.825 day cell sorting of human

NOTE Confidence: 0.9444214

00:09:07.825 --> 00:09:09.345 samples, but typically this is

NOTE Confidence: 0.9444214

00:09:09.345 --> 00:09:11.285 restricted to small sample sizes

NOTE Confidence: 0.86884767

00:09:11.825 --> 00:09:13.285 and a short time commitment,

NOTE Confidence: 0.92785645

00:09:13.904 --> 00:09:15.205 or can be accommodated

NOTE Confidence: 0.9958496

00:09:16.020 --> 00:09:16.760 after hours.

NOTE Confidence: 0.9611328

00:09:17.860 --> 00:09:19.300 And, finally, I'd like to

NOTE Confidence: 0.9611328

00:09:19.300 --> 00:09:20.920 mention that we had validated

NOTE Confidence: 0.9925712

00:09:21.300 --> 00:09:22.920 a number of high parameter

NOTE Confidence: 0.9925712

00:09:23.060 --> 00:09:24.120 antibody panels,

NOTE Confidence: 0.954108

00:09:24.580 --> 00:09:25.460 for those of you who

NOTE Confidence: 0.954108

00:09:25.460 --> 00:09:26.900 don't wish to design your

NOTE Confidence: 0.954108

00:09:26.900 --> 00:09:28.180 own. And and at the

NOTE Confidence: 0.954108

00:09:28.180 --> 00:09:29.480 moment, these are purchasable.

NOTE Confidence: 0.996148

00:09:31.245 --> 00:09:32.605 And I will stop there

NOTE Confidence: 0.996148

00:09:32.605 --> 00:09:34.065 and answer any questions.

NOTE Confidence: 1

00:09:37.245 --> 00:09:37.985 Thank you.

NOTE Confidence: 0.71069336

00:09:44.399 --> 00:09:44.899 K.

NOTE Confidence: 0.9959717

00:09:45.440 --> 00:09:46.879 We will move on to

NOTE Confidence: 0.9959717

00:09:46.879 --> 00:09:48.100 our last presentation.

NOTE Confidence: 0.9027448

00:09:50.079 --> 00:09:51.440 Hello, everybody. My name is

NOTE Confidence: 0.9027448

00:09:51.440 --> 00:09:52.339 Kamala Krambaipudi.

NOTE Confidence: 0.87593585

00:09:52.959 --> 00:09:54.879 I manage the Irvator share

NOTE Confidence: 0.87593585

00:09:54.879 --> 00:09:57.015 resource, resource center here. We're

NOTE Confidence: 0.87593585

00:09:57.015 --> 00:09:57.975 part of the cancer center

NOTE Confidence: 0.87593585

00:09:57.975 --> 00:09:58.455 support,

NOTE Confidence: 0.7602539

00:09:58.855 --> 00:09:59.915 grant share resources.

NOTE Confidence: 0.8438721

00:10:03.255 --> 00:10:04.615 ISR is supervised by doctor

NOTE Confidence: 0.8438721

00:10:04.615 --> 00:10:05.115 Stern,

NOTE Confidence: 0.945421

00:10:05.575 --> 00:10:07.015 and reviewed annually by the

NOTE Confidence: 0.945421

00:10:07.015 --> 00:10:09.275 YCC shared, oversight committee.

NOTE Confidence: 0.9095126

00:10:11.960 --> 00:10:13.400 The shared resource is managed

NOTE Confidence: 0.9095126

00:10:13.400 --> 00:10:15.000 by doc director doctor Jay

NOTE Confidence: 0.9095126

00:10:15.000 --> 00:10:15.400 Chen.

NOTE Confidence: 0.95967066

00:10:16.600 --> 00:10:18.440 He is the, director for

NOTE Confidence: 0.95967066

00:10:18.440 --> 00:10:19.720 ISR. He's a professor of

NOTE Confidence: 0.95967066

00:10:19.720 --> 00:10:21.400 therapeutic radiology, member of the

NOTE Confidence: 0.95967066

00:10:21.400 --> 00:10:23.155 Yale Cancer Center, and vice

NOTE Confidence: 0.95967066

00:10:23.155 --> 00:10:24.775 chair for the physics research

NOTE Confidence: 0.95967066

00:10:24.835 --> 00:10:26.615 and education in therapeutic radiology.

NOTE Confidence: 0.9826137

00:10:27.155 --> 00:10:28.115 He has about three years

NOTE Confidence: 0.9826137

00:10:28.115 --> 00:10:29.875 of experience in radiation physics,

NOTE Confidence: 0.9826137

00:10:29.875 --> 00:10:31.175 and then he's an

NOTE Confidence: 0.8606262

00:10:31.475 --> 00:10:33.235 in house expert on gamma

NOTE Confidence: 0.8606262

00:10:33.235 --> 00:10:34.375 and x rays.

NOTE Confidence: 0.98720706

00:10:36.570 --> 00:10:37.530 He's also a fellow of

NOTE Confidence: 0.98720706

00:10:37.530 --> 00:10:39.150 the American Association of Physicists,

NOTE Confidence: 0.8510132

00:10:39.850 --> 00:10:41.130 in medicine and the chief

NOTE Confidence: 0.8510132

00:10:41.130 --> 00:10:42.910 physicist of Smile Against Hospital

NOTE Confidence: 0.8510132

00:10:43.210 --> 00:10:44.030 at Yale

NOTE Confidence: 0.85498047

00:10:44.410 --> 00:10:45.390 New Haven Hospital.

NOTE Confidence: 0.9072037

00:10:46.410 --> 00:10:48.090 So our mission of the

NOTE Confidence: 0.9072037

00:10:48.090 --> 00:10:49.090 shared resource irradiated

NOTE Confidence: 0.9274926

00:10:49.530 --> 00:10:50.834 shared resource is to provide

NOTE Confidence: 0.9274926

00:10:50.834 --> 00:10:52.195 easy and reliable access to

NOTE Confidence: 0.9274926

00:10:52.195 --> 00:10:53.635 cutting edge gamma and x-ray

NOTE Confidence: 0.9274926

00:10:53.635 --> 00:10:54.615 irradiation technologies,

NOTE Confidence: 0.9866333

00:10:55.154 --> 00:10:56.934 services, and scientific consultations

NOTE Confidence: 0.97398156

00:10:57.394 --> 00:10:58.915 for all the cancer researchers

NOTE Confidence: 0.97398156

00:10:58.915 --> 00:10:59.654 at Yale.

NOTE Confidence: 0.9753312

00:11:01.394 --> 00:11:02.675 So we have four objectives

NOTE Confidence: 0.9753312

00:11:02.675 --> 00:11:04.650 and aims. Aim one being

NOTE Confidence: 0.9753312

00:11:04.650 --> 00:11:06.890 providing convenient and reliable access

NOTE Confidence: 0.9753312

00:11:06.890 --> 00:11:07.690 to state of the art

NOTE Confidence: 0.9753312

00:11:07.690 --> 00:11:08.670 gamma ray and

NOTE Confidence: 0.8165317

00:11:09.050 --> 00:11:11.290 global digit, x-ray radiators with

NOTE Confidence: 0.8165317

00:11:11.290 --> 00:11:13.150 cost effective radiation for all

NOTE Confidence: 0.8165317

00:11:13.210 --> 00:11:14.190 YCC members.

NOTE Confidence: 0.9462185

00:11:14.730 --> 00:11:16.010 We provide reliable access to

NOTE Confidence: 0.9462185

00:11:16.010 --> 00:11:17.465 all the radiators. We offer

NOTE Confidence: 0.9462185

00:11:17.465 --> 00:11:19.485 expert help with experimental design.

NOTE Confidence: 0.9583094

00:11:19.945 --> 00:11:21.225 We train all our users

NOTE Confidence: 0.9583094

00:11:21.225 --> 00:11:22.685 to operate the machines safely

NOTE Confidence: 0.9583094

00:11:22.905 --> 00:11:24.105 and keeping in line with

NOTE Confidence: 0.9583094

00:11:24.105 --> 00:11:24.845 EHS protocols,

NOTE Confidence: 0.9981864

00:11:25.545 --> 00:11:26.425 and we keep make sure

NOTE Confidence: 0.9981864

00:11:26.425 --> 00:11:27.465 we keep the machines running

NOTE Confidence: 0.9981864

00:11:27.465 --> 00:11:28.605 twenty four by seven.

NOTE Confidence: 0.9255371

00:11:31.750 --> 00:11:33.210 The key services of ISR,

NOTE Confidence: 0.9255371

00:11:33.510 --> 00:11:35.190 we provide radiation physics and

NOTE Confidence: 0.9255371

00:11:35.190 --> 00:11:36.710 technical consultation on the best

NOTE Confidence: 0.9255371

00:11:36.710 --> 00:11:37.850 use of all the radiators.

NOTE Confidence: 0.86681855

00:11:38.309 --> 00:11:40.550 We provide periodic quality assurance

NOTE Confidence: 0.86681855

00:11:40.550 --> 00:11:41.910 test to ensure accurate dose

NOTE Confidence: 0.86681855

00:11:41.910 --> 00:11:43.610 deliveries delivered by all radiators.

NOTE Confidence: 0.99072266

00:11:44.165 --> 00:11:45.445 We train our users and

NOTE Confidence: 0.99072266

00:11:45.445 --> 00:11:46.345 help with compliance.

NOTE Confidence: 0.9229248

00:11:47.285 --> 00:11:48.965 We also escort users if

NOTE Confidence: 0.9229248

00:11:48.965 --> 00:11:50.184 they use a gamma radiator,

NOTE Confidence: 0.93688965

00:11:50.725 --> 00:11:51.684 then if they don't wanna

NOTE Confidence: 0.93688965

00:11:51.684 --> 00:11:53.125 go any background checks, which

NOTE Confidence: 0.93688965

00:11:53.125 --> 00:11:54.184 I'll talk about later.

NOTE Confidence: 0.8531605

00:11:54.885 --> 00:11:56.005 We also make sure we

NOTE Confidence: 0.8531605

00:11:56.005 --> 00:11:57.285 maintain our latest all year

NOTE Confidence: 0.8531605

00:11:57.285 --> 00:11:57.605 on.

NOTE Confidence: 0.9491455

00:11:58.165 --> 00:11:59.809 We do QH every month,

NOTE Confidence: 0.9491455

00:12:00.050 --> 00:12:02.070 every week, quarterly, and annually.

NOTE Confidence: 0.9499512

00:12:05.250 --> 00:12:07.190 So, we have, different equipment.

NOTE Confidence: 0.7770386

00:12:08.050 --> 00:12:09.970 We have a CCM gamma

NOTE Confidence: 0.7770386

00:12:09.970 --> 00:12:10.950 ray is related.

NOTE Confidence: 0.841156

00:12:11.475 --> 00:12:12.595 We have four precision x

NOTE Confidence: 0.841156

00:12:12.595 --> 00:12:14.214 vat three twenty kilowatts irradiators

NOTE Confidence: 0.841156

00:12:14.274 --> 00:12:15.015 across campus.

NOTE Confidence: 0.8685354

00:12:15.714 --> 00:12:17.015 We have our newest addition,

NOTE Confidence: 0.8685354

00:12:17.235 --> 00:12:18.995 the SARP, the small animal

NOTE Confidence: 0.8685354

00:12:18.995 --> 00:12:20.995 radiation research platform, image guided

NOTE Confidence: 0.8685354

00:12:20.995 --> 00:12:21.495 accelerator,

NOTE Confidence: 0.93791854

00:12:22.035 --> 00:12:23.154 and we also have radiation

NOTE Confidence: 0.93791854

00:12:23.154 --> 00:12:24.214 proximity equipment.

NOTE Confidence: 0.9973958

00:12:24.779 --> 00:12:25.279 Briefly,

NOTE Confidence: 0.70979816

00:12:25.980 --> 00:12:26.480 CGM137

NOTE Confidence: 0.6020508

00:12:27.100 --> 00:12:28.320 Gamma radiator provides,

NOTE Confidence: 0.9859009

00:12:28.699 --> 00:12:30.240 high penetration gamma rays,

NOTE Confidence: 0.9604085

00:12:30.860 --> 00:12:32.059 for whole body or cell

NOTE Confidence: 0.9604085

00:12:32.059 --> 00:12:32.559 variations.

NOTE Confidence: 0.89746094

00:12:33.339 --> 00:12:34.540 The Precision x y three

NOTE Confidence: 0.89746094

00:12:34.540 --> 00:12:36.459 twenty's, they deliver tunable kV

NOTE Confidence: 0.89746094

00:12:36.459 --> 00:12:37.740 x rays for cell tissue

NOTE Confidence: 0.89746094

00:12:37.740 --> 00:12:39.584 and small animal radiation with

NOTE Confidence: 0.89746094

00:12:39.584 --> 00:12:41.665 controlled dose rates. The SARP,

NOTE Confidence: 0.89746094

00:12:42.064 --> 00:12:44.064 enables a CT guided, highly

NOTE Confidence: 0.89746094

00:12:44.064 --> 00:12:45.824 targeted radiation for precise small

NOTE Confidence: 0.89746094

00:12:45.824 --> 00:12:46.725 animal research.

NOTE Confidence: 0.94377255

00:12:47.504 --> 00:12:48.964 We also have radiation dosimeter

NOTE Confidence: 0.94377255

00:12:49.024 --> 00:12:50.545 equipment, which support both cell

NOTE Confidence: 0.94377255

00:12:50.545 --> 00:12:51.524 and animal studies.

NOTE Confidence: 0.7663574

00:12:53.380 --> 00:12:54.260 So, this,

NOTE Confidence: 0.9234009

00:12:54.980 --> 00:12:56.020 this is how a gamma

NOTE Confidence: 0.9234009

00:12:56.020 --> 00:12:57.320 radiator looks like.

NOTE Confidence: 0.9093487

00:12:58.340 --> 00:12:59.620 It delivers up to six

NOTE Confidence: 0.9093487

00:12:59.620 --> 00:13:00.740 six and then six hundred

NOTE Confidence: 0.9093487

00:13:00.740 --> 00:13:02.420 sixty two kV gamma rays.

NOTE Confidence: 0.9093487

00:13:02.420 --> 00:13:04.020 It supports molecular samples, cell

NOTE Confidence: 0.9093487

00:13:04.020 --> 00:13:05.540 cancers, tumor cells, and small

NOTE Confidence: 0.9093487

00:13:05.540 --> 00:13:06.040 animals.

NOTE Confidence: 0.9478563

00:13:07.195 --> 00:13:08.394 It use it's also used

NOTE Confidence: 0.9478563

00:13:08.394 --> 00:13:09.755 for wide dose rate range

NOTE Confidence: 0.9478563

00:13:09.755 --> 00:13:11.434 and flexible collimation, and it

NOTE Confidence: 0.9478563

00:13:11.434 --> 00:13:12.315 has been a core tool

NOTE Confidence: 0.9478563

00:13:12.315 --> 00:13:13.675 for many years since nineteen

NOTE Confidence: 0.9478563

00:13:13.675 --> 00:13:15.295 ninety for all many YCC

NOTE Confidence: 0.9478563

00:13:15.355 --> 00:13:15.855 studies.

NOTE Confidence: 0.9423523

00:13:17.115 --> 00:13:18.475 We will be, removing this

NOTE Confidence: 0.9423523

00:13:18.475 --> 00:13:19.475 machine in the next year

NOTE Confidence: 0.9423523

00:13:19.475 --> 00:13:20.315 as part of a chip

NOTE Confidence: 0.9423523

00:13:20.315 --> 00:13:20.815 program

NOTE Confidence: 0.82873535

00:13:21.160 --> 00:13:22.200 to play and replacing this

NOTE Confidence: 0.82873535

00:13:22.200 --> 00:13:23.500 with a new X-ray retail.

NOTE Confidence: 0.83496094

00:13:25.880 --> 00:13:27.179 So we have a four

NOTE Confidence: 0.99853516

00:13:28.120 --> 00:13:29.820 X-ray machines across campus.

NOTE Confidence: 0.9214121

00:13:30.840 --> 00:13:32.300 These are X-ray three twenties,

NOTE Confidence: 0.9214121

00:13:32.520 --> 00:13:33.340 made by precision.

NOTE Confidence: 0.881679

00:13:33.695 --> 00:13:34.975 They're used for rating cell

NOTE Confidence: 0.881679

00:13:34.975 --> 00:13:36.895 cultures, beta layers, bacteria, insects,

NOTE Confidence: 0.881679

00:13:36.895 --> 00:13:38.175 and small and small animals

NOTE Confidence: 0.881679

00:13:38.175 --> 00:13:39.955 like rodents, mice, and rats.

NOTE Confidence: 0.881679

00:13:40.175 --> 00:13:41.695 It's supposed both targeted and

NOTE Confidence: 0.881679

00:13:41.695 --> 00:13:42.675 whole body radiation,

NOTE Confidence: 0.95822483

00:13:43.455 --> 00:13:44.895 used for studies in tumor

NOTE Confidence: 0.95822483

00:13:44.895 --> 00:13:46.195 and normal tissue response,

NOTE Confidence: 0.6210473

00:13:46.750 --> 00:13:49.149 hematopoietic depletion, immunotherapy relation with

NOTE Confidence: 0.6210473

00:13:49.149 --> 00:13:49.970 imaging research.

NOTE Confidence: 0.90482587

00:13:50.429 --> 00:13:51.790 The output contain, it goes

NOTE Confidence: 0.90482587

00:13:51.790 --> 00:13:52.670 up to three grades per

NOTE Confidence: 0.90482587

00:13:52.670 --> 00:13:54.050 minute at fifty centimeters SSD,

NOTE Confidence: 0.84646267

00:13:54.910 --> 00:13:56.750 distributed across four medical campus

NOTE Confidence: 0.84646267

00:13:56.750 --> 00:13:58.370 buildings for community access.

NOTE Confidence: 0.91305923

00:13:58.990 --> 00:14:00.269 So we have four x-ray

NOTE Confidence: 0.91305923

00:14:00.269 --> 00:14:01.695 machines, one located in TAC,

NOTE Confidence: 0.91305923

00:14:01.775 --> 00:14:03.455 one located in Amistad, one

NOTE Confidence: 0.91305923

00:14:03.455 --> 00:14:04.975 located in Josh, and another

NOTE Confidence: 0.91305923

00:14:04.975 --> 00:14:06.595 one located in LCI building.

NOTE Confidence: 0.91305923

00:14:06.655 --> 00:14:07.535 And this is a gamma

NOTE Confidence: 0.91305923

00:14:07.535 --> 00:14:08.275 ray radar.

NOTE Confidence: 0.88560444

00:14:09.695 --> 00:14:11.375 So our newest edition is

NOTE Confidence: 0.88560444

00:14:11.375 --> 00:14:12.735 called the SARP, small animal

NOTE Confidence: 0.88560444

00:14:12.735 --> 00:14:13.955 radiation research platform.

NOTE Confidence: 0.9605726

00:14:14.340 --> 00:14:16.520 It's an advanced multifunctional accelerator

NOTE Confidence: 0.9605726

00:14:16.660 --> 00:14:18.920 designed specifically for animal research.

NOTE Confidence: 0.9605726

00:14:19.140 --> 00:14:19.940 So what it is is

NOTE Confidence: 0.9605726

00:14:19.940 --> 00:14:21.140 a two twenty five kilowatt

NOTE Confidence: 0.9605726

00:14:21.140 --> 00:14:23.060 accelerator designed specifically for high

NOTE Confidence: 0.9605726

00:14:23.060 --> 00:14:24.820 precision irradiation of mice and

NOTE Confidence: 0.9605726

00:14:24.820 --> 00:14:25.320 rats.

NOTE Confidence: 0.98341876

00:14:25.700 --> 00:14:26.820 The key features of this

NOTE Confidence: 0.98341876

00:14:26.820 --> 00:14:27.860 machine would be cone beam

NOTE Confidence: 0.98341876

00:14:27.860 --> 00:14:28.760 CT imaging,

NOTE Confidence: 0.9448834

00:14:29.065 --> 00:14:30.525 a three d treatment planning

NOTE Confidence: 0.9448834

00:14:30.585 --> 00:14:31.865 just like a miniature clinical

NOTE Confidence: 0.9448834

00:14:31.865 --> 00:14:33.705 relation therapy planning system. It

NOTE Confidence: 0.9448834

00:14:33.705 --> 00:14:34.905 has a movable gantry with

NOTE Confidence: 0.9448834

00:14:34.905 --> 00:14:36.665 a robotic stage so beams

NOTE Confidence: 0.9448834

00:14:36.665 --> 00:14:38.025 can come from many angles

NOTE Confidence: 0.9448834

00:14:38.025 --> 00:14:39.085 for precise targeting.

NOTE Confidence: 0.79853517

00:14:40.265 --> 00:14:41.805 It also has high sorry

NOTE Confidence: 0.9004639

00:14:42.265 --> 00:14:43.325 it has a high reproducibility.

NOTE Confidence: 0.87788445

00:14:46.080 --> 00:14:47.200 So why it matters, it

NOTE Confidence: 0.87788445

00:14:47.200 --> 00:14:48.880 it allows focal aggregation of

NOTE Confidence: 0.87788445

00:14:48.960 --> 00:14:50.480 instead of whole body exposure

NOTE Confidence: 0.87788445

00:14:50.480 --> 00:14:51.860 so you can target precisely

NOTE Confidence: 0.87788445

00:14:52.080 --> 00:14:53.120 or what organ you wanna

NOTE Confidence: 0.87788445

00:14:53.120 --> 00:14:53.860 treat with.

NOTE Confidence: 0.9609057

00:14:54.240 --> 00:14:55.840 It ex reduces normal tissue

NOTE Confidence: 0.9609057

00:14:55.840 --> 00:14:57.620 injury by sparing healthy areas.

NOTE Confidence: 0.9609057

00:14:57.735 --> 00:14:59.415 It's essential for studying tumor

NOTE Confidence: 0.9609057

00:14:59.415 --> 00:15:01.495 response, immunology, DNA repair, and

NOTE Confidence: 0.9609057

00:15:01.495 --> 00:15:02.555 normal tissue toxicity.

NOTE Confidence: 0.90101534

00:15:03.095 --> 00:15:04.295 So in a simple summary,

NOTE Confidence: 0.90101534

00:15:04.295 --> 00:15:05.495 it's a clinical reason that

NOTE Confidence: 0.90101534

00:15:05.495 --> 00:15:06.774 we devised, but scaled down

NOTE Confidence: 0.90101534

00:15:06.774 --> 00:15:07.435 for mice.

NOTE Confidence: 0.99703544

00:15:08.855 --> 00:15:09.654 So this is how it

NOTE Confidence: 0.99703544

00:15:09.654 --> 00:15:10.394 looks like.

NOTE Confidence: 0.92201453

00:15:14.070 --> 00:15:15.269 So the mouse goes on

NOTE Confidence: 0.92201453

00:15:15.269 --> 00:15:16.709 the bed over here. There's

NOTE Confidence: 0.92201453

00:15:16.709 --> 00:15:18.649 a CT detector. The camera

NOTE Confidence: 0.92201453

00:15:18.790 --> 00:15:19.930 takes a three d convinity

NOTE Confidence: 0.92201453

00:15:19.990 --> 00:15:20.490 image.

NOTE Confidence: 0.9468471

00:15:20.870 --> 00:15:21.910 Your X-ray head is on

NOTE Confidence: 0.9468471

00:15:21.910 --> 00:15:22.490 the top.

NOTE Confidence: 0.97457886

00:15:22.870 --> 00:15:24.089 We have a collimator.

NOTE Confidence: 0.9713171

00:15:24.855 --> 00:15:25.815 You can choose your own.

NOTE Confidence: 0.9713171

00:15:26.055 --> 00:15:26.935 We have we have five

NOTE Confidence: 0.9713171

00:15:26.935 --> 00:15:28.535 different collimators of various tumor

NOTE Confidence: 0.9713171

00:15:28.535 --> 00:15:29.815 sizes. You can choose your

NOTE Confidence: 0.9713171

00:15:29.815 --> 00:15:31.035 collimator and,

NOTE Confidence: 0.95729285

00:15:31.575 --> 00:15:33.415 treat them, through the mouse

NOTE Confidence: 0.95729285

00:15:33.415 --> 00:15:34.535 or the rat with whatever

NOTE Confidence: 0.95729285

00:15:34.535 --> 00:15:35.975 tumor it has. So this

NOTE Confidence: 0.95729285

00:15:35.975 --> 00:15:37.334 is a treatment time software.

NOTE Confidence: 0.95729285

00:15:37.334 --> 00:15:38.295 Here, like, I show you

NOTE Confidence: 0.95729285

00:15:38.295 --> 00:15:39.195 a lung tumor

NOTE Confidence: 0.9220703

00:15:39.740 --> 00:15:40.620 in the lung of a

NOTE Confidence: 0.9220703

00:15:40.620 --> 00:15:42.240 mouse so you can target

NOTE Confidence: 0.87565106

00:15:43.260 --> 00:15:44.300 just the tumor in the

NOTE Confidence: 0.87565106

00:15:44.300 --> 00:15:44.800 mouse.

NOTE Confidence: 0.865923

00:15:47.100 --> 00:15:48.139 So we also have radiation

NOTE Confidence: 0.865923

00:15:48.139 --> 00:15:50.079 dosimeter equipment. We have INGMO

NOTE Confidence: 0.865923

00:15:50.139 --> 00:15:51.200 based absolute dosimetry.

NOTE Confidence: 0.8941611

00:15:52.214 --> 00:15:53.894 It measures absolute dose and

NOTE Confidence: 0.8941611

00:15:53.894 --> 00:15:55.834 it converts collected charge into

NOTE Confidence: 0.8941611

00:15:55.975 --> 00:15:57.175 and converts that into a

NOTE Confidence: 0.8941611

00:15:57.175 --> 00:15:58.295 citric rate. It's used to

NOTE Confidence: 0.8941611

00:15:58.295 --> 00:15:59.815 calibrate our machines and we

NOTE Confidence: 0.8941611

00:15:59.815 --> 00:16:00.935 use it for daily and

NOTE Confidence: 0.8941611

00:16:00.935 --> 00:16:01.435 monthly

NOTE Confidence: 0.87858075

00:16:01.815 --> 00:16:02.315 QAs.

NOTE Confidence: 0.9119873

00:16:02.774 --> 00:16:03.735 It's sensitive to set up

NOTE Confidence: 0.9119873

00:16:03.735 --> 00:16:05.035 an environmental corrections.

NOTE Confidence: 0.9505703

00:16:06.389 --> 00:16:07.430 We also have a EBT4

NOTE Confidence: 0.9505703

00:16:07.430 --> 00:16:09.190 filament dosimetry. It provides two

NOTE Confidence: 0.9505703

00:16:09.190 --> 00:16:10.790 d dose distribution. It's great

NOTE Confidence: 0.9505703

00:16:10.790 --> 00:16:12.630 for checking uniformity, beam profiles,

NOTE Confidence: 0.9505703

00:16:12.630 --> 00:16:13.610 and small fields.

NOTE Confidence: 0.95493454

00:16:14.070 --> 00:16:15.930 It requires scanning and calibration

NOTE Confidence: 0.95493454

00:16:16.070 --> 00:16:17.589 curve. It's good for relative

NOTE Confidence: 0.95493454

00:16:17.589 --> 00:16:18.389 dose but not for the

NOTE Confidence: 0.95493454

00:16:18.389 --> 00:16:19.370 absolute dose.

NOTE Confidence: 0.9281529

00:16:19.764 --> 00:16:20.964 We also have a TLD

NOTE Confidence: 0.9281529

00:16:20.964 --> 00:16:21.945 dosimeter system.

NOTE Confidence: 0.8180135

00:16:23.445 --> 00:16:25.045 It's useful where films or

NOTE Confidence: 0.8180135

00:16:25.045 --> 00:16:27.045 cham ion chambers or gaphomic

NOTE Confidence: 0.8180135

00:16:27.045 --> 00:16:28.644 films, EBT four films can

NOTE Confidence: 0.8180135

00:16:28.644 --> 00:16:30.185 go, and it's

NOTE Confidence: 0.87712497

00:16:30.644 --> 00:16:31.845 measures a point dose. It's

NOTE Confidence: 0.87712497

00:16:31.845 --> 00:16:33.445 good for verification of delivered

NOTE Confidence: 0.87712497

00:16:33.445 --> 00:16:35.040 dose. We also have a

NOTE Confidence: 0.87712497

00:16:35.040 --> 00:16:36.260 free chemical dosimeter.

NOTE Confidence: 0.88028115

00:16:36.720 --> 00:16:38.000 It measures relation dose, but

NOTE Confidence: 0.88028115

00:16:38.000 --> 00:16:39.360 how much how much it

NOTE Confidence: 0.88028115

00:16:39.360 --> 00:16:40.880 oxidizes ferrous ions in a

NOTE Confidence: 0.88028115

00:16:40.880 --> 00:16:42.580 specific sulfuric acid solution.

NOTE Confidence: 0.9022136

00:16:44.320 --> 00:16:45.600 So some of our experimental

NOTE Confidence: 0.9022136

00:16:45.600 --> 00:16:47.140 setups on gamma and actuators,

NOTE Confidence: 0.8975275

00:16:47.600 --> 00:16:48.880 we have a whole mouse

NOTE Confidence: 0.8975275

00:16:48.880 --> 00:16:50.464 pie, for mouse whole body

NOTE Confidence: 0.8975275

00:16:50.464 --> 00:16:50.964 radiation.

NOTE Confidence: 0.88783485

00:16:51.425 --> 00:16:53.024 We have shields available built

NOTE Confidence: 0.88783485

00:16:53.024 --> 00:16:54.425 for a brain radiation or

NOTE Confidence: 0.88783485

00:16:54.425 --> 00:16:55.605 a flank tumor radiation.

NOTE Confidence: 0.9757362

00:16:56.225 --> 00:16:57.584 You can always do tissue

NOTE Confidence: 0.9757362

00:16:57.584 --> 00:16:59.505 culture plates and culture flask

NOTE Confidence: 0.9757362

00:16:59.505 --> 00:17:00.404 for cell radiation.

NOTE Confidence: 0.8404798

00:17:02.000 --> 00:17:03.040 We also have two years

NOTE Confidence: 0.8404798

00:17:03.040 --> 00:17:04.640 filters for harder beams and

NOTE Confidence: 0.8404798

00:17:04.640 --> 00:17:06.400 aluminum two million millimeter filter

NOTE Confidence: 0.8404798

00:17:06.400 --> 00:17:07.540 for a softer beam,

NOTE Confidence: 0.99154663

00:17:08.080 --> 00:17:09.520 so we can, always use

NOTE Confidence: 0.99154663

00:17:09.520 --> 00:17:10.580 those filters too.

NOTE Confidence: 0.9630127

00:17:13.680 --> 00:17:15.140 So, trading and access

NOTE Confidence: 0.91009635

00:17:15.744 --> 00:17:16.784 is basically very simple. You

NOTE Confidence: 0.91009635

00:17:16.784 --> 00:17:17.664 have to do three three

NOTE Confidence: 0.91009635

00:17:17.664 --> 00:17:18.784 step three steps, get an

NOTE Confidence: 0.91009635

00:17:18.784 --> 00:17:20.085 online training with EHS,

NOTE Confidence: 0.87474453

00:17:20.385 --> 00:17:21.585 obtain a validation to submit

NOTE Confidence: 0.87474453

00:17:21.585 --> 00:17:22.304 it, fill out a form,

NOTE Confidence: 0.87474453

00:17:22.304 --> 00:17:23.505 and submit to EHS, and

NOTE Confidence: 0.87474453

00:17:23.505 --> 00:17:24.865 hands on training with me,

NOTE Confidence: 0.87474453

00:17:24.865 --> 00:17:25.664 and you would be able

NOTE Confidence: 0.87474453

00:17:25.664 --> 00:17:26.325 to use,

NOTE Confidence: 0.9697673

00:17:26.705 --> 00:17:28.065 any of the exclamations across

NOTE Confidence: 0.9697673

00:17:28.065 --> 00:17:28.565 campus.

NOTE Confidence: 0.85230714

00:17:31.730 --> 00:17:33.490 So same thing. Companies require

NOTE Confidence: 0.85230714

00:17:33.490 --> 00:17:35.009 acts required training and a

NOTE Confidence: 0.85230714

00:17:35.009 --> 00:17:36.369 plain relation to submit it.

NOTE Confidence: 0.85230714

00:17:36.369 --> 00:17:37.409 For a common radiator, you

NOTE Confidence: 0.85230714

00:17:37.409 --> 00:17:38.450 need to submit a background

NOTE Confidence: 0.85230714

00:17:38.450 --> 00:17:39.889 clearance form with with your

NOTE Confidence: 0.85230714

00:17:39.889 --> 00:17:41.409 weight with EHS. It takes

NOTE Confidence: 0.85230714

00:17:41.409 --> 00:17:42.690 about a while, but you

NOTE Confidence: 0.85230714

00:17:42.690 --> 00:17:43.570 don't have to wait for

NOTE Confidence: 0.85230714

00:17:43.570 --> 00:17:44.690 the background clearance. I can

NOTE Confidence: 0.85230714

00:17:44.690 --> 00:17:45.809 export escort you to the

NOTE Confidence: 0.85230714

00:17:45.809 --> 00:17:47.225 common radiator and perform your

NOTE Confidence: 0.85230714

00:17:47.225 --> 00:17:48.525 experiments for you.

NOTE Confidence: 0.94069016

00:17:51.145 --> 00:17:52.265 So all our scheduling and

NOTE Confidence: 0.94069016

00:17:52.265 --> 00:17:53.645 training is done via PPMS.

NOTE Confidence: 0.99763995

00:17:54.025 --> 00:17:55.065 I'll provide the link up

NOTE Confidence: 0.99763995

00:17:55.065 --> 00:17:55.565 here.

NOTE Confidence: 0.96226436

00:17:55.945 --> 00:17:57.385 Please access this link, and

NOTE Confidence: 0.96226436

00:17:57.385 --> 00:17:59.065 everything's up. All all the

NOTE Confidence: 0.96226436

00:17:59.065 --> 00:18:00.265 information we need for training

NOTE Confidence: 0.96226436

00:18:00.265 --> 00:18:01.385 and scheduling is up on

NOTE Confidence: 0.96226436

00:18:01.385 --> 00:18:02.525 the PPMS website.

NOTE Confidence: 0.9864502

00:18:04.100 --> 00:18:04.840 So quickly,

NOTE Confidence: 0.95983887

00:18:05.220 --> 00:18:06.359 some of our research,

NOTE Confidence: 0.8854667

00:18:06.980 --> 00:18:08.100 here, we have a lung

NOTE Confidence: 0.8854667

00:18:08.100 --> 00:18:09.619 cancer presentation with doctor Hayman

NOTE Confidence: 0.8854667

00:18:09.619 --> 00:18:10.519 and doctor Contessa.

NOTE Confidence: 0.88456434

00:18:10.820 --> 00:18:11.700 So we use he they

NOTE Confidence: 0.88456434

00:18:11.700 --> 00:18:12.740 use the x-ray three twenty

NOTE Confidence: 0.88456434

00:18:12.740 --> 00:18:14.179 to deliver fractional doses for

NOTE Confidence: 0.88456434

00:18:14.179 --> 00:18:15.320 cell and most studies.

NOTE Confidence: 0.90995276

00:18:15.940 --> 00:18:17.220 We had doctor Ryan Jensen

NOTE Confidence: 0.90995276

00:18:17.220 --> 00:18:19.075 for DNA repair. He used

NOTE Confidence: 0.90995276

00:18:19.075 --> 00:18:20.275 DNA extra three twenty to

NOTE Confidence: 0.90995276

00:18:20.275 --> 00:18:21.554 induce DNA breaks to measure

NOTE Confidence: 0.90995276

00:18:21.554 --> 00:18:22.855 the RAD fifty one foci.

NOTE Confidence: 0.79843926

00:18:23.715 --> 00:18:24.775 We also have a humanized

NOTE Confidence: 0.79843926

00:18:24.835 --> 00:18:26.275 skeletal model. We talked to

NOTE Confidence: 0.79843926

00:18:26.275 --> 00:18:28.034 Flavwell's lab. They use the

NOTE Confidence: 0.79843926

00:18:28.034 --> 00:18:29.414 sublethal x-ray conditioning

NOTE Confidence: 0.87478304

00:18:29.955 --> 00:18:31.794 for enable HSC engraftment in

NOTE Confidence: 0.87478304

00:18:31.794 --> 00:18:32.294 mice.

NOTE Confidence: 0.91433376

00:18:32.659 --> 00:18:33.539 And we also have doctor

NOTE Confidence: 0.91433376

00:18:33.539 --> 00:18:33.980 Pillai,

NOTE Confidence: 0.9091752

00:18:34.419 --> 00:18:35.859 from George Billing. They use

NOTE Confidence: 0.9091752

00:18:35.859 --> 00:18:36.899 the X-ray three twenty to

NOTE Confidence: 0.9091752

00:18:36.899 --> 00:18:38.419 induce DNA damage to test

NOTE Confidence: 0.9091752

00:18:38.419 --> 00:18:39.640 synthetic lethal responses.

NOTE Confidence: 0.9980469

00:18:41.299 --> 00:18:41.799 So,

NOTE Confidence: 0.8583069

00:18:42.260 --> 00:18:43.380 for the fiscal year of

NOTE Confidence: 0.8583069

00:18:43.380 --> 00:18:44.440 twenty twenty five,

NOTE Confidence: 0.9498393

00:18:44.740 --> 00:18:45.700 we had about fifty two

NOTE Confidence: 0.9498393

00:18:45.700 --> 00:18:47.140 PIs and twenty one departments

NOTE Confidence: 0.9498393

00:18:47.140 --> 00:18:48.555 that use our machines. Ninety

NOTE Confidence: 0.9498393

00:18:48.635 --> 00:18:49.275 Ninety eight percent of our

NOTE Confidence: 0.9498393

00:18:49.275 --> 00:18:50.735 members are YCC members.

NOTE Confidence: 0.9050293

00:18:51.115 --> 00:18:52.555 So, we we had a

NOTE Confidence: 0.9050293

00:18:52.555 --> 00:18:53.994 use of a thousand two

NOTE Confidence: 0.9050293

00:18:53.994 --> 00:18:55.435 two hundred for the fiscal

NOTE Confidence: 0.9050293

00:18:55.435 --> 00:18:56.575 year twenty twenty five.

NOTE Confidence: 0.91049063

00:18:57.755 --> 00:18:59.035 Quickly about the service rates,

NOTE Confidence: 0.91049063

00:18:59.115 --> 00:19:00.395 we charge about hundred and

NOTE Confidence: 0.91049063

00:19:00.395 --> 00:19:01.775 thirty dollars per thirty minutes.

NOTE Confidence: 0.91049063

00:19:02.029 --> 00:19:03.230 With assisted, that mean I

NOTE Confidence: 0.91049063

00:19:03.230 --> 00:19:04.429 would be doing separation for

NOTE Confidence: 0.91049063

00:19:04.429 --> 00:19:05.549 you. If you get trained

NOTE Confidence: 0.91049063

00:19:05.549 --> 00:19:06.429 and use it by yourself,

NOTE Confidence: 0.91049063

00:19:06.429 --> 00:19:07.309 it's sixty five dollars for

NOTE Confidence: 0.91049063

00:19:07.309 --> 00:19:08.510 thirty minutes. You don't need

NOTE Confidence: 0.91049063

00:19:08.510 --> 00:19:09.389 a you need just need

NOTE Confidence: 0.91049063

00:19:09.389 --> 00:19:10.350 a training, and you have

NOTE Confidence: 0.91049063

00:19:10.350 --> 00:19:11.389 an expert access, meaning you

NOTE Confidence: 0.91049063

00:19:11.389 --> 00:19:12.669 can access the machine anytime

NOTE Confidence: 0.91049063

00:19:12.669 --> 00:19:13.570 area of the week.

NOTE Confidence: 0.8667931

00:19:15.805 --> 00:19:16.685 So this is our contact

NOTE Confidence: 0.8667931

00:19:16.685 --> 00:19:18.365 information here, doctor Jay Chen,

NOTE Confidence: 0.8667931

00:19:18.365 --> 00:19:19.005 and that's me,

NOTE Confidence: 0.8756885

00:19:20.045 --> 00:19:21.245 And our website and people

NOTE Confidence: 0.8756885

00:19:21.245 --> 00:19:22.365 in the website isn't included

NOTE Confidence: 0.8756885

00:19:22.365 --> 00:19:23.565 in the presentation over here,

NOTE Confidence: 0.8756885

00:19:23.565 --> 00:19:24.785 which I'll share with you.

NOTE Confidence: 0.8756885

00:19:24.925 --> 00:19:26.865 Thank you, everybody. Any questions?

NOTE Confidence: 1

00:19:29.220 --> 00:19:30.520 Thank you so much.

NOTE Confidence: 0.9311035

00:19:32.660 --> 00:19:34.119 Do we have any questions,

NOTE Confidence: 0.9968533

00:19:35.460 --> 00:19:36.500 for this or any of

NOTE Confidence: 0.9968533

00:19:36.500 --> 00:19:37.640 the other shared resources?

NOTE Confidence: 0.9680176

00:19:46.075 --> 00:19:46.575 Alright.

NOTE Confidence: 0.954834

00:19:46.955 --> 00:19:47.455 Well,

NOTE Confidence: 0.92578125

00:19:48.395 --> 00:19:48.795 before

NOTE Confidence: 0.8993758

00:19:49.275 --> 00:19:50.715 everyone just hold tight. Tanya's

NOTE Confidence: 0.8993758

00:19:50.715 --> 00:19:52.155 gonna give the information about

NOTE Confidence: 0.8993758

00:19:52.155 --> 00:19:53.275 the survey. I just wanted

NOTE Confidence: 0.8993758

00:19:53.275 --> 00:19:53.675 to thank,

NOTE Confidence: 0.9558919

00:19:54.315 --> 00:19:55.195 all of the directors of

NOTE Confidence: 0.9558919

00:19:55.195 --> 00:19:56.234 the shared resources for their

NOTE Confidence: 0.9558919

00:19:56.234 --> 00:19:57.595 time today for giving this

NOTE Confidence: 0.9558919

00:19:57.595 --> 00:19:59.119 very quick introduction.

NOTE Confidence: 0.97166395

00:19:59.740 --> 00:20:01.340 And, again, survey is really

NOTE Confidence: 0.97166395

00:20:01.340 --> 00:20:02.940 important because this is gonna

NOTE Confidence: 0.97166395

00:20:02.940 --> 00:20:03.820 tell us what our next

NOTE Confidence: 0.97166395

00:20:03.820 --> 00:20:05.580 steps are, and what our

NOTE Confidence: 0.97166395

00:20:05.580 --> 00:20:07.180 asks are. So please just

NOTE Confidence: 0.97166395

00:20:07.180 --> 00:20:07.980 take the time to do

NOTE Confidence: 0.97166395

00:20:07.980 --> 00:20:08.480 that.

NOTE Confidence: 0.99698895

00:20:12.055 --> 00:20:13.815 Okay. So as you guys

NOTE Confidence: 0.99698895

00:20:13.815 --> 00:20:14.295 heard,

NOTE Confidence: 0.9906006

00:20:15.015 --> 00:20:16.295 we will be sending a

NOTE Confidence: 0.9906006

00:20:16.295 --> 00:20:17.515 post event survey.

NOTE Confidence: 0.9211426

00:20:18.135 --> 00:20:19.415 Please, please, please,

NOTE Confidence: 0.99043274

00:20:19.815 --> 00:20:21.495 take it's about two minutes.

NOTE Confidence: 0.99043274

00:20:21.815 --> 00:20:22.855 So please take the time

NOTE Confidence: 0.99043274

00:20:22.855 --> 00:20:24.850 to complete it. All responses

NOTE Confidence: 0.99043274

00:20:24.910 --> 00:20:25.410 will

NOTE Confidence: 0.8461914

00:20:25.790 --> 00:20:26.690 be fully anonymous.

NOTE Confidence: 0.9633226

00:20:27.150 --> 00:20:28.930 However, there is an option

NOTE Confidence: 0.9633226

00:20:28.990 --> 00:20:30.590 to put your name in

NOTE Confidence: 0.9633226

00:20:30.590 --> 00:20:31.490 a different survey,

NOTE Confidence: 0.9736023

00:20:32.030 --> 00:20:32.830 if you like to be

NOTE Confidence: 0.9736023

00:20:32.830 --> 00:20:34.590 entered into a raffle, and

NOTE Confidence: 0.9736023

00:20:34.590 --> 00:20:35.869 we will be selecting two

NOTE Confidence: 0.9736023

00:20:35.869 --> 00:20:36.369 winners.

NOTE Confidence: 0.9904785

00:20:37.235 --> 00:20:38.535 So thank you again,

NOTE Confidence: 0.9848633

00:20:38.915 --> 00:20:40.115 to everyone and to all

NOTE Confidence: 0.9848633

00:20:40.115 --> 00:20:41.635 the shared resources leaders for

NOTE Confidence: 0.9848633

00:20:41.635 --> 00:20:42.835 joining us. I hope everyone

NOTE Confidence: 0.9848633

00:20:42.835 --> 00:20:43.975 has a great afternoon.

NOTE Confidence: 1

00:20:44.755 --> 00:20:45.494 Thank you.

NOTE Confidence: 0.9781494

00:20:46.515 --> 00:20:48.615 Bye. Bye. Thank you.

NOTE Confidence: 0.9248047

00:20:51.299 --> 00:20:51.799 Thank

NOTE Confidence: 0.93237305

00:20:52.900 --> 00:20:53.640 you. Alright.