

0DWHULDOV DQG 0HWKRGV

LVLV D VLQJOH &HQWUH FRUHHODWLRQ DQDO\VLV RI D SURVSHFWLYH VWXG\
DSSURYHG E\ WKH ORFDO ,QVWLWXWLRQDO 5HYLHZ %RDUG ,5% %HWZHHQ
-DQXDU\ WR 'HFHPEHU ZH HYDOXDWHG DOO SDWLHQWV DW /RQGRQ
+HDOWK 6FLHQFHV &HQWUH ZLWK NQRZQ +&& ZKR XQGHUZHQW /57 DV
EULGJLQJ WKHUDS\ SULRU WR OLYHU WUDQVSODQDWLRQ

,QFOXVLRQ FULWHULD LQFOXGHG DQ\ SDWLHQWV ZLWK SURYHQ GLDJQRVLV RI
+&& HLWKHU E\ KLVWRSDWKRORJ\ RU G\QDPLF LPDJLQJ &7 05, \$00
SDUWLFLSDQWV ZHUH HOLJLEOH IRU OLYHU WUDQVSODQW EDVHG RQ +&& WXP

&LWDWISQKQHP 0 'ULPDQ ' %DVKLU 2 \$O -XGDLEL % .DNDQL 1 HW DO +HSDWRFHO
 &RUUHODWLRQV EHWZHHQ 3UH /LYHU 7UDQVSODQWV ,PDJLQJ DQG RLSODQW 3DWKRO

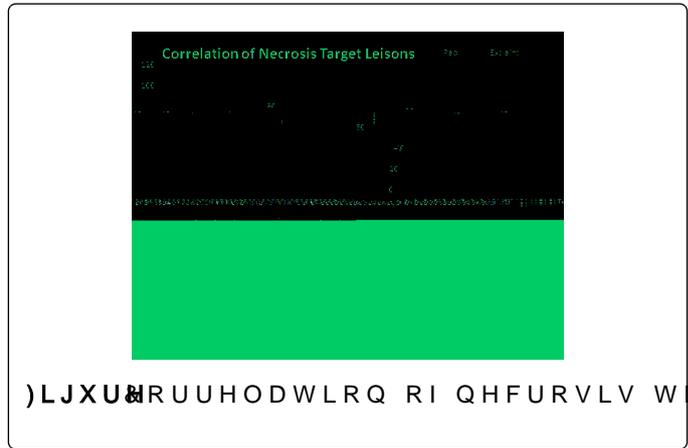
3DJH RI

DVVHVVPHQW RI OLYHU H[SODQWV UHYHDO
 ZLWK FRPSOHWH DQG SDUWLDO UHVSQRVH
 UHVSQRVH VXPPDULJHG LQ 7DEOH

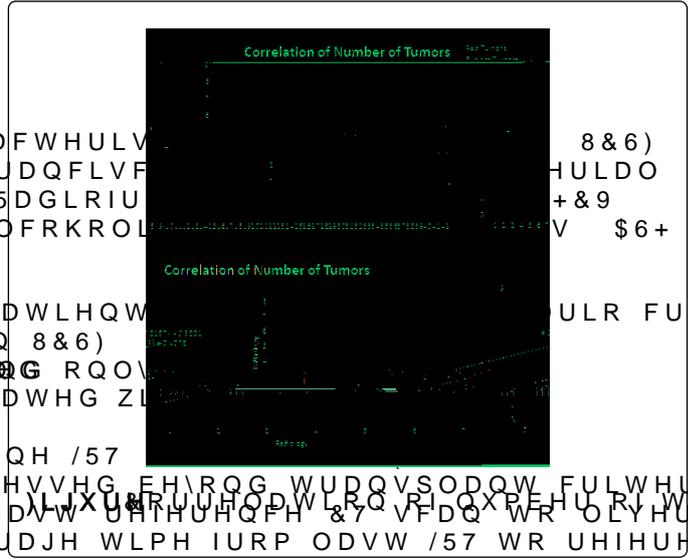
	&RPSOHWH UHVSQRVH	3DUWLDO UHVSQRVH	6WDEOH GLVHDV
5DGLRORJLFDO	UHVSQRVH		
3DWKRORJLFDO	5HVSQRVH		

7DEOH HYDOXDWLRQ RI WXPRU UHVSQRVH DFF

LW\ IBM BLSLHQWV KDG DFFXUDWH
 P5(&,67 ZLWKLQ FRPSDULQJ U&7 WR H
 7ZHQW\ RI WKH SUHGLFWHG FRG
 KDG D SRRU FRQFRUGDQFH ! EI
 UHIHUHQFH &7 LPDJHV &RPSDULQJ QHFUR
 WR SDWKORJLFDO DVVHVVPHQW RI QHF
 &RUUHODWLRQV DOFXODWHG DV)L



)LJXU&RUUHODWLRQ RI QHFURVLV WDUJHV



)LJXU&RUUHODWLRQ RI QHFURVLV WDUJHV

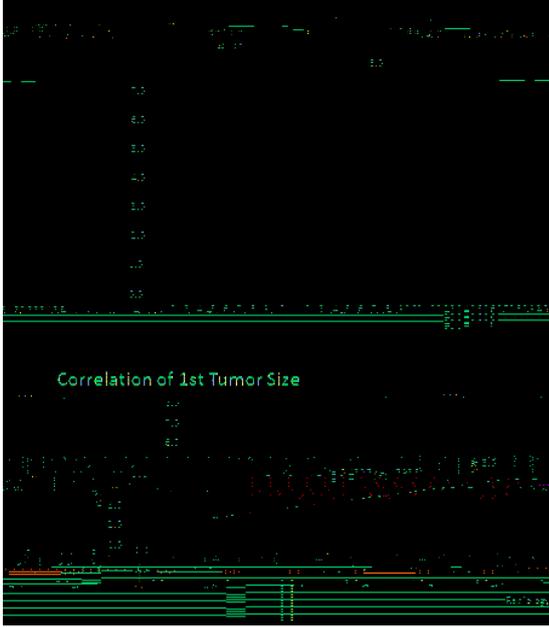
0HDQ \$JH DW WUDQVSODQW HDV	
*HQQHU	
0DOH	
)HPDOH	
'LDJQRVLV	
+&9	
1\$6+	
\$6+	
2WKHU	
\$)3 0HDQ	QJ P/
7UDQVSODQW &ULWHULD	5DGLRORJ\
5 YDOXH LQ 2QWDULR	
5 YDOXH LQ 0LODQ	
5 YDOXH LQ 8&6)	
7UDQVSODQW &ULWHULD	3DWKRORJ\
3 YDOXH LQ 2QWDULR	
3 YDOXH LQ 0LODQ	
3 YDOXH LQ 8&6)	
/RFDO UHJLRQDO 7KHUHS\ /57	
7\$&(
5)\$	
1R RI WXPRU	
5DGLRORJ\	
3DWKRORJ\	

7DEOH XPPDULJH WKH EDVHOLQH FKDUFWHULV
 8QLYHUVLW\ RI &DOLIRUQLD 6DQ)UDQFLV
 FKHPRWKHUHS\ HPEROLJDWLRQ 5)\$ 5DGLRIU
 +HSDWLWLWV & YDFFLQH 1\$6+ 1RQDOFRKROL
 +HSDWLWLWV \$-D\$)SLDQXWLV

\$W WLPH RI OLVWLQJ DOO RI RXU SDWLHQW
 ODMRULW\ RI SDWLHQWV ZHUH ZLWKHQ 8&6)
 +&& ZDV VLQJOH OHVLRQ ZDV LQVHFWDG RQO
 ORVW RI RXU SDWLHQWV ZHUH WUHDWHG ZL

SDWLHQWV KDG PRUH WKDQ RQH /57
 WZR KDG ! 5)\$ 1R SDWLHQWV SURJUHVVHG FHRQJ WUDQVSODQW FULWHULD
 H DYHUDJH WLPH IUDPH IURP WKH ODVW UHIHUHQFH &7 VFDQ WR OLYHU
 WUDQVSODQW ZDV GD\ WKH DYHUDJH WLPH IURP ODVW /57 WR UHIHUHQFH
 &7 ZDV GD\

8VLQJ P5(&,67 FULWHULD IRU UDGLRORJLFDO HYDOXDWLRQ RI 7XPRU
 QHFURVLV DQG SDWLHQWV DFKLHYHG FRPSOHWH UHVSQRVH
 &5 DQG SDUWLDO UHVSQRVH VRSUWHV LQ 7DEOH



)LJXU&RUUHODWLRQ RI VW WXPRU VL]H

5DYDDROD]L(UFRODQRUHQV&HVFROQHW DO IRU VXUYLYDO LQ KHSDWRFHOOXODU FDUFLQRPD
3DUWLDO 1HFURVLV RQ +HSDWRFHOOXODU &DUFLQRPD 1RGXOHV)DFLOLWDWHV 7XPRU
5HFUXUDNQBHMHU 7UDQVSODQWDWLRQ 7UDQVSODQWDWLRQ
ODMQR \$GDP 5 %&DPXWVKSQLF\$HHW DO
,Q~XHQBFSUHR\$VHUDDQWIDUH/HFKEDORHPEROLJDWLRQ RQ
UHVHFWLRQ DQG WUDQVSODQWDWLRQ IRU KHSDWRFHOOXODU FDUFLQRPD LQ SDWLHQW
ZLWK FLUUKRVLV \$QQDOV RI 6XUJHU\
6RWLUR\$FOODODU BROPH(3VGLG\$N%URND,ODHW DO
'LVHVDVHDVFRXLYMHU WUDQVSODQWDWLRQ IRU KHSDWRFHOOXODU
FDUFLQRPD LQ SDWLHQWV ZLWK FRP\$OHWH WXPRU QHFURVLV LQ OLYHU H[SODQWV
SHUIRUPDQFH RI EULGJLQJ WUHDWPHQWV (XU - 0HG 5HV
(LVHQKDSXHUDV3%HRJDHUWFKZDUW] /+ 6DUJHQW ' HW DO
1HZ UHVSRQVH HYDOXDWRURUFLWHLWHLQ LQ VROLG
5(&,67 JXLGHOLQH YHUVLRQ (XURSHDQ -RXUQDO RI &DQFHU
/HQFL\$QLRYHW 0RGL)H\$&,67 P5(&,67 DVVHVVPHQW
IRU KHSDWRFHOOXODU FDUFLQRPD 6HPLQ /LYHU 'LV
/HQFL\$QL 1HZ GDWDPRVXSFRJWZQP5(&,67
IRU +HSDWRFHOOXODU &DUFLQRPD &OLQ &DQFHU 5HV
(XURSHDQ \$VVRFLDWLRQ IRU WKZUJVDXLDWLRQKH OLYHU (XURSHDQ
)RU 5HVHDFK \$QG 7UHDWPHQW 21 &DQFHU (\$6/ (257& FOLQLFDO
SUDFWLFH JXLGHOLQH V PDQDJHPHQW RI KHSDWRFHOOXODU FDUFLQRPD - +HSDWRO

7RV\$VWKBQ&DJDP 6KDSLURQ\$VHFDQ
5HDVVHVVLQJ VHOHFWRQ FULWHULD SULRU WR OLYHU WUDQVSODQWDWLRQ IRU
KHSDWRFHOOXODU FDUFLQRPD\$FXWUORJLQJWZQVH SODQW
5HFLSLHQWV GDWDEDVH +HSDWRORJ\ %DOWLPRUH 0G
*LOOPRUH\$XDUW 6 +DPHZR\$G\$G GZDUG 1 HW DO
(\$6/ DQG R\$H\$SRQVHV DUH LQGSHHQGHQW SURJQRVWLF IDFWRUV